MEXICAN AGRICULTURAL POLICIES: AN IMMIGRATION GENERATOR?

HEARING

BEFORE THE

EMPLOYMENT, HOUSING, AND AVIATION SUBCOMMITTEE

OF THE

COMMITTEE ON GOVERNMENT OPERATIONS HOUSE OF REPRESENTATIVES

ONE HUNDRED THIRD CONGRESS

FIRST SESSION

OCTOBER 28, 1993

Printed for the use of the Committee on Government Operations

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MEXICAN AGRICULTURAL POLICIES: AN IMMIGRATION GENERATOR?

THURSDAY, OCTOBER 28, 1993

HOUSE OF REPRESENTATIVES,
EMPLOYMENT, HOUSING, AND AVIATION SUBCOMMITTEE
OF THE COMMITTEE ON GOVERNMENT OPERATIONS,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:05 a.m., in room 2247, Rayburn House Office Building, Hon. Collin C. Peterson (chairman of the subcommittee) presiding.

Present: Representatives Collin C. Peterson, Floyd H. Flake, Karen L. Thurman, and William H. Zeliff, Jr.

Also present: Representative Bernard Sanders.

Staff present: Edith A. Holleman, staff director; June Livingston, clerk; Jane O. Cobb and Michael D. Nannini, minority professional staff, Committee on Government Operations.

OPENING STATEMENT OF CHAIRMAN PETERSON

Mr. PETERSON. The subcommittee will come to order.

The hearing this morning will be shorter than usual. You may like to hear that, Mr. Zeliff. Two of our expected witnesses, Raphael Carral, a dairy farmer and leader of farmers in Chihuahua, and Aristarco Quines Solis, a leader of farmers in Oaxaca, are not able to appear. Both are involved in major farm demonstrations against the North American Free Trade Agreement, Mexico's agricultural policy, and the current high interest rates that have resulted in foreclosures and deny absolutely critical loans to farmers, at a time when the government is making land available for sale for the first time in a long time.

When I was in Chihuahua earlier this month, I saw first hand the demonstrations that farmers have ongoing in many state capitals. They have moved thousands of tractors into government squares and have set up farmer camps. Two days ago, the farmers from Chihuahua began blocking a bridge used by the maquiladoras between El Paso and Ciudad Juárez to publicize their discontent. Yesterday, hundreds began a tractor drive from Oaxaca to Mexico City, almost 200 miles away.

These Mexican farmers represent the equivalent of our small- to medium-size family farmers in America. They are protesting the North American Free Trade Agreement becoming Mexico's sole farm policy. They are also protesting the 18 to 32 percent interest rates that make it impossible for farmers to borrow the money necessary to plant their crops, upgrade their equipment, invest in irrigation equipment, or to buy additional land, and they are protest-

ing foreclosures on land and equipment. They are protesting what they see as a virtual abandonment by the government of the farm sector, which supports 26 percent of Mexico's active workforce.

The Wall Street Journal has called it the worst agricultural crisis in 50 years, stating that its primary effect is to propel more illegal immigrants to the United States. That is the accumulation of all these policies. This is immigration that will further depress farm-worker and other wages on both sides of the border.

We do not disagree. When I went out and looked at some of the farming area, there are changes that need to be made in Mexico's farming sector. For more than 60 years, tight government control of agriculture was implemented by crop, energy, and consumer price subsidies, government credit, and marketing systems. It became a de facto anti poverty and employment program. Land ownership restrictions, long a part of Mexico's political heritage, discouraged investment and development.

These programs kept people on the farm and subsidized consumers in the growing cities. It encouraged low productivity, and only 20 percent of the land under cultivation is appropriate for farming beyond a subsistence level. One-third can produce only under irrigation, but, as many of you know, there is also a shortage of water.

In 1982, Mexico began a structural readjustment program that emphasized the development of export manufacturing facilities. Support of the agricultural sector declined, subsidies were cut, gasoline prices went up 17,000 percent, and state-owned enterprises were privatized. The result of all this was a severe decline in food production, with a corresponding increase in food imports, rural poverty, and migration.

Mexican immigration to the United States went up by 800 percent during the late 1980's. Now, the price supports for basic grains, including corn and beans, will be phased out over 2 years. These are Mexico's largest crops and form its basic food supply; 2 million farmers grow those crops, and almost every economist agrees that these producers cannot compete with cheaper U.S. corn and beans. For example, corn is selling for $2.71 per bushel in the United States; its price in Mexico is in excess of $6.

I was surprised to learn, when I was down there, that a senator from my State had this idea, what he called "decoupling," which was very unpopular and was rejected by the House and Senate and the agricultural community in the United States, but it has been adopted in Mexico. I am sure that former Senator Boschwitz is proud of the handiwork that he has accomplished in Mexico.

The Salinas government has indicated that it wants to remove two-thirds of Mexico's rural residents, or 15 million people, from the land in their modernization process. There is really little or no help to make the transition. There are no special loan programs to help farmers who can survive to get the credit that they need to survive. With 30 percent interest rates and this situation, there is just no way that this works out for these people to be able to buy their lands and to get into business.

The question is, where are these people going to go? Hundreds of thousands of very poor people have already left for the cities and the United States because there are not now enough jobs in Mexico to absorb this volume, nor, in our opinion, will there be. Mexico

would need to achieve an astronomical annual growth rate of about 10 percent to provide jobs for all of its people. Last year, its gross domestic product grew by about 2.6 percent.

In fact, a 2-year study by the Office of Technology Assessment concluded, in its agricultural section, that the movement of people rather than the movement of goods may have the greatest implications for the United States. NAFTA would probably increase the rate at which farmers are displaced, exerting additional downward pressure on wages for unskilled workers in both Mexico and the United States.

A principal finding of the OTA report is that this displacement, in combination with reduced employment in the noncompetitive small business sector will increase immigration to the United States.

Recently, in response to the growing unrest by farmers, President Salinas announced a new election-year "Procampo" subsidy program, which includes several years of per-acre subsidies for grain producers, as I said earlier, to replace the production subsidy. The government marketing organization will assist for 1 more year, and then the subsidy is supposed to be phased out.

This subsidy is supposed to help farmers make a transition to other crops. As I said, that idea was floated here in the United States and rejected. So for the 2.2 million very poor, who consume their own corn, what we are basically going to be doing is putting those people on welfare, which is the conclusion that people came to in this country when they looked at this program. For farmers who market their corn, it is not nearly enough to allow them to make a transition, given the situation.

This new policy, I, for one, have some real concerns about what they are doing down there, although that is really not our business I guess. We do believe that this will complicate the difficult employment situation and add to the downward pressure on wages in both the United States and Mexico. We know that the debate over NAFTA has, to this date, largely ignored this particular aspect of the situation.

We are looking forward to hearing from our witnesses. It is unfortunate that we could not get a couple of the other farmers. I will now recognize Mr. Zeliff. After his statement, we will hear from our witnesses.

[The prepared statement of Mr. Peterson follows:]

STATEMENT OF COLLIN C. PETERSON
CHAIRMAN
EMPLOYMENT, HOUSING AND AVIATION SUBCOMMITTEE
October 28, 1993

The hearing this morning will be shorter than usual. Two of our expected witnesses, Rafael Corral, a dairy farmer and leader of farmers in Chihuahua, and Aristarco Aquino-Solis, a leader of farmers in Oaxaca (WHA - HA - KA), are not able to appear. Both are involved in major farm demonstrations against the North American Free Trade Agreement (NAFTA), Mexico's agriculture policy, and the current high interest rates that have resulted in foreclosures and deny absolutely critical loans to farmers.

When I was in Chihuahua earlier this month, I saw firsthand the demonstrations farmers have on-going in many state capitals. They have moved thousands of tractors into the government squares and set up farmers' camps. Two days ago, the farmers from Chihuahua began blocking a bridge used by the maquiladoras between El Paso and Cuidad Juarez to publicize their discontent. Yesterday, hundreds began a tractor drive from Oaxaca to Mexico City, almost 200 miles away.

These Mexican farmers represent the equivalent of our small-to-medium-sized family farmers. They are protesting the North American Free Trade Agreement (NAFTA) becoming Mexico's sole farm policy. They are protesting the 18-32 percent interest rates that make it impossible for farmers to borrow the money necessary to plant their crops, upgrade their equipment, invest in irrigation equipment or buy additional land. They are protesting foreclosures on land and equipment. And they are protesting what they see as the virtual abandonment of the farm sector -- which supports 26 percent of Mexico's active workforce -- by the government.

The Wall Street Journal has called it the worst agricultural crisis in 50 years stating that its primary effect is to propel more illegal immigrants to the U.S. This is immigration that will depress farmworker and other wages on both sides of the border.

We do not disagree that changes must be made in Mexico's farming sector. For more than 60 years, tight government control of agriculture was implemented by crop, energy and consumer price subsidies, government credit and marketing systems. It became a de facto anti-poverty and employment program. Land ownership restrictions -- long a part of Mexico's political heritage -- discouraged investment and development. These programs kept people on the farm and subsidized consumers in the growing cities. It encouraged low productivity. Only 20 percent of the land under cultivation is appropriate for farming beyond the subsistence level. One-third can produce only under irrigation, but there is a shortage of water.

In 1982, Mexico began a structural readjustment program that

emphasized development of export manufacturing facilities. Support of the agricultural sector declined. Subsidies were cut. For example, gasoline prices went up 17,000 percent. State-owned enterprises were privatized. The result was a severe decline in food production with a corresponding increase in food imports, rural poverty and migration. Mexican immigration to the U.S. went up by 800 percent during the late 1980s.

Now the price supports for basic grains, including corn and beans, will be phased out over two years. These are Mexico's largest crops and form its basic food supply. Two million farmers grow these crops. Almost every economist agrees that these producers cannot compete with the cheaper U.S. corn and beans. For example, corn is selling for $2.71 per bushel in the U.S. Its subsidized price in Mexico is over $6.00.

The Salinas government has indicated that it wants to remove two-thirds of Mexico's rural residents -- or 15 million people, --from their land in the modernization process. There is little or no help to make the transition. There are no special loan programs to help farmers who can survive get the credit they need to survive. Where are these people going to go? Hundreds of thousands of the very poor have already left for the cities -- and the United States because there are not now enough jobs in Mexico to absorb this volume. Nor will there be. Mexico would need to achieve an astronomical annual growth rate of about 10 percent to provide jobs for all of its people. Last years, its GDP grew by 2.6 percent.

In fact, a two-year study by the Office of Technology Assessment concluded in its agriculture section that, "Movement of people, rather than movement of goods, may have the greatest implications for the United States. . . NAFTA would probably increase the rate at which . . . farmers are displaced, exerting additional downward pressure on wages for unskilled workers in both Mexico and the United States." A principal finding of the OTA report is that this displacement, in combination with reduced employment in the non-competitive, small business sector will increase emigration to the U.S.

Recently, in response to the growing unrest by the farmers, President Salinas announced a new, election-year, "pro campo" subsidy program which includes several years of a per-acre subsidy for grain producers to replace the production subsidy. The government marketing organization will assist for one more year. The subsidy is supposed to help farmers make a transition to other crops. For the 2.2 million very poor who consume their own corn, it is viewed as a welfare payment. For the farmers who market their corn, it is not nearly enough to allow them to make the transition.

Is this policy wrong or right? We don't know. We do know that it will complicate the difficult employment situation and add to the downward pressure on wages in both the U.S. and Mexico. We know that the debate over NAFTA has to date ignored it.

Mr. ZELIFF. Thank you, Mr. Chairman. Thank you for calling today's hearing, in which we examine the North American Free Trade Agreement, Mexico's agricultural policies, and their respective effects on immigration.

Mexico is our fastest growing market for agricultural products. Agricultural exports to Mexico have risen significantly in recent years, growing from $1.4 billion in 1986 to $3.8 billion last year. Of Mexico's total agricultural imports, 70 percent come from the United States.

The United States Department of Agriculture estimates that 97,000 United States jobs are currently supported by agriculture and the food industry trade with Mexico. USDA further predicts that passage of NAFTA would add 54,000 more new jobs to this total. So if NAFTA will be good for United States agriculture, what will be the impact on Mexico's farmers?

While we were in Mexico recently, let me say that we had a very interesting 4 days. We had some of the folks who are appearing today that we were able to talk with them. We heard testimony from farmers, including Mr. Quintana, who joins us this morning, that suggests that NAFTA will dislocate many farmers in Mexico who are unable to compete.

There may be some truth to this, but I must point out that the dislocation and migration of Mexico's farmers may be an inevitable consequence of Mexico's changing economy, similar to what has happened in our country and not a product of the free trade agreement.

Mexico's agriculture historically has been highly protected by the Mexican Government. The Salinas administration has acted to change this, reducing import duties to a maximum of 20 percent, except for frozen beef. NAFTA will eliminate these over a phasein period.

On October 4, President Salinas announced a new agricultural support program, Procampo, which should directly benefit Mexico's 2.2 million subsistence farmers, who traditionally have not received governmental support.

While the previous support program tended to benefit larger commercial farmers, Procampo was designed to provide support payments to the smaller subsistence farmers, who many fear may be driven off their farms by increased trade with the United States. Farmers must continue to work their land in order to qualify for support payments, which will serve to slow migration off the farms.

Programs like Procampo, coupled with the general economic growth in Mexico that will come as it opens its markets, will, in the long run, reduce pressure on illegal immigration. Studies by the Congressional Budget Office and the General Accounting Office conclude that the implementation of NAFTA will likely reduce illegal immigration into the United States as Mexico's economy grows.

I am looking forward to hearing the testimony of our witnesses today, as we examine this issue in greater detail. Certainly, I do not believe there is anything more important in terms of an issue that is going to come before us. Thank you, Mr. Chairman.

Mr. PETERSON. Thank you, Mr. Zeliff.

You had said in your statement that the highest level of tariff was 20 percent. I believe in the case of corn, if I read the agree-

ment right, it is 215 percent. There are a couple of commodities where they are considerably higher.

Mr. ZELIFF. We may have honest disagreements, and I look forward to the testimony to clarify our views.

Mr. PETERSON. Very good.

Our first panel of witnesses this morning are Victor Quintana, whom we met in Mexico, and Father Camilo Daniel Pérez. Mr. Quintana is a leader of the Peasants Democratic Front and is also a professor at the Autonomous University of Ciudad Juárez, at the National School of Anthropology and History of Northern Mexico. Father Pérez is a Catholic parish priest and an advisor to rural and human rights organizers.

We welcome both of you to this hearing and look forward to hearing your testimony. It is the custom, in the Government Operations Committee, which holds investigative hearings, to swear in all witnesses. Does either of you have any objection to being sworn in? If not, would you please stand and raise your right hand.

[Witnesses sworn.]

Mr. PETERSON. Please be seated, Mr. Quintana and Father Pérez. Your written statements will be entered in the record in their entirety. So you can either read your whole statement, or you can summarize, whatever would be your pleasure. And welcome to the committee.

STATEMENT OF VICTOR M. QUINTANA, CHIEF ADVISER, PEASANT DEMOCRATIC COALITION, CHIHUAHUA, MEXICO, ACCOMPANIED BY ANDRES THOMAS COTERIS, CONSECUTIVE TRANSLATOR, SIMPLY TRAVEL, WASHINGTON, DC

Mr. QUINTANA. Thank you very much. I am going to thank you in English, first, for your visit to Mexico. We were very glad to receive you. We also want to thank the Rural Coalition for all the support and linking work for this hearing.

[Consecutive translation.]

Mr. COTERIS [for Mr. Quintana]. I want to begin with an excuse. Aside from myself, there should be at least two or three other producers, an indigenous person from the state of Oaxaca, a milk producer from the state of Chihuahua, and an agricultural worker from Chihuahua as well.

The first person could not come, because the indigenous communities of Oaxaca are preparing a mobilization in order to defend their natural resources and their culture. My companions from Chihuahua did not come because, with 200 other producers, they are blocking the bridge for import and export which joins Juárez with El Paso. I, myself, jumped out of my sleeping bag in order to take the plane to come here to Washington to meet with you.

This struggle, which is currently going on at the international bridge, is part of a broad movement which has been generated in Mexico in the last 6 months. In Chihuahua, 12 diverse organizations of agricultural workers have formed an organization to coordinate the agricultural producers. In Jalisco and Zacatecas, the producers come together, in El Barzon as well as in other states, in the farmers' union cooperative, in Sonora, and also in Baja California and other types of organizations.

Many years ago in Mexico, you could not see this coming together among the wealthy, middle income, and poor agricultural workers; those who come from the party of the government, together with the right wing as well as the left, and those who come from the north and the south as well as the central part of the country. We have never seen before that the state of discomfort would explode, perhaps at the same time, in 18 out of the 32 states of the Republic.

The forms of protest are varied and significant. They surround Guadalajara, the central part of the city, with 300 tractors. In Chihuahua, the same happens in 10 cities around the state there. In the capital of our country, there are several week encampments in front of the National Palace. The producers of apples give away many tons of apples to the public. The corn producers burn their crops. In Chihuahua, they burn tractors and they take over banks. Milk producers take their cows in front of the Office of the Governors.

The root of these struggles is that agriculture is no longer productive in Mexico. This is something that is you see in the long-overdue loans which have very much increased from 395 million new pesos in 1988 to 4.3 billion in 1993, affecting the 92,000 producers. These overdue loans, in a single year, increased 216 percent. This has demanded that many producers go into bankruptcy. From August 1992 to August 1993, the confiscation of goods on the part of banks increased 154 percent.

Agriculture is not profitable for many reasons. We have bank rates between 18 and 32 percent annually. The subsidies are decreasing, and the costs increase. The government permits indiscriminate importations, even including agricultural contraband. At the same time, they ferociously control the prices of local products. They do not invest in the infrastructure, and they let financing fall.

In 1992, the area that has been financed by the official bank for the countryside lessened by four-fifths. The milk producers have fallen because the government does not allow them to increase the price of their product. This has been going on for 6 years. In addition, they cannot compete with imported powdered milk. We are the No. 1 importer in the world of powdered milk.

The producers of pork have lost, facing the import of pork from the United States, 25 percent of the internal market. They have diminished their production by 40 percent. Of the 20,000 pork farms, 4,000 have been closed. In Chihuahua, they abandoned the apple orchards because we cannot compete with 60,000 tons of this fruit that are imported or brought in through contraband from the United States.

What most irritates us at this time is the voraciousness of our banks and the protection that our government gives to them. They permit them to realize, in 1993, what the alchemists of the Middle Ages searched for over many centuries: To change paper into gold, to capitalize interests. To do this over the course of a year, they tripled capital loans, while thousands of producers lose their farms. And they overkill their goods which have been very diligently worked over many years. The financial oligarchy, protected by the government, continues to become more wealthy.

On the eve of the ratification of the treaty, we have fewer farmers now than we had in 1988, and we have fewer agricultural production than in 1988, but we have 12 more members of the world club of multimillionaires, in dollars.

What we demand in our struggles is that the economic policies change so that the countryside in Mexico can once again be productive. We do not reject free trade but the Salinas version of this treaty. We demand that there be renewed and fresh investment in the countryside.

The government changed the Constitution, and they put on the market the lands of the farmers in order to bring in foreign investment. Until now, 0.8 percent of foreign investment last year was directed to the agricultural sector. We want the debt of the farmers to be renegotiated, that a fund be created to convert the cultivated products, and that the producers be able to participate in the policies which affect them.

This agriculture, which has been so beaten down, and each and every time it is less and less protected, is the one that has to compete in the NAFTA context with the agriculture which is most developed in the world. Even without having ratified NAFTA, if these economic policies of the Mexican Government continue, the most conservative calculations say that we will lose 1.2 million jobs rurally, more than twice the total number of jobs that the industrial parks have created in 20 years in an exceptional state.

Many people are scandalized by the process of ethnic cleansing which has been happening in the former Yugoslavia. The current policies of the Mexican Government are not very different from this. They want, as Father Camilo says, to cleanse the farmers from the countryside.

Ladies and gentlemen of Congress, we ask you to consider and to ponder deeply all of these facts. You are the first representatives who have consulted us about NAFTA. In Mexico, our legislators never came to us.

If we are to sign a free trade agreement among our three countries, this should be a broadly democratic process. It should include the protection of our families, not including in it basic grains, nor meat, nor milk. It should, in fact, create compensatory fund programs for the development of the producers and the most poor sectors, to conserve their jobs with the land so that they can live with dignity. It should include supports for the poor agricultural workers to realize a more efficient work but also one that is sustainable.

Ladies and gentlemen of Congress, a month ago in Chihuahua, the milk producers spilled into the street 30,000 liters of milk which had been imported from the United States. This was the "Chihuahua Milk Party." This act, done in our presence, puts us in a sister relationship with your past and with the future of us both.

We cannot think about the integration of our economies that goes beyond the democratic values that we both share. Nor is it possible for us to support an agreement which gives privilege only to the largest economic actors and beats down on those who aspire and beats down on the productive energy of millions of people and small- and medium-sized businesses.

Democracy in the United States was born and was founded on the struggle of the small producers and local communities against the economic impositions of the empire, in the struggle for freedom in trade for all and not for only a few. If these convictions will guide your vote regarding NAFTA, those of us who believe and want a dignified life and a democratic future for the vast majority of our three countries, we will be always grateful to you.

[The prepared statement of Mr. Quintana follows:]

MEXICAN AGRICULTURE AND THE NORTH AMERICAN FREE TRADE AGREEMENT

Prepared statement by

VICTOR M. QUINTANA,

chief adviser,
Peasant Democratic Coalition (Frente Democrático Campesino),
Chihuahua, MEXICO,

before the Employment, Housing and Aviation Subcommittee of the Committee on Government Operations, U.S. House of Representatives.

Washington, D. C., October 28, 1993.

MEXICAN AGRICULTURE AND THE NORTH AMERICAN FREE TRADE AGREEMENT

Mr. Chairman, I would like to thank you and your staff for inviting me to appear before this Subcommittee this morning. My name is Victor Quintana, and I am an adviser to the Peasant Democratic Coalition in the state of Chihuahua, in northern Mexico. I come to this country with the support of our brothers and sisters of the Rural Coalition in the United States.

Let me now address the issue of NAFTA and agriculture in Mexico.

We do not know if in the new international division of labor or in the parallel agreements of NAFTA there will be established for the young agricultural workers of the municipality of Guerrero grave-digger jobs en Wichita. Neither do we know if the young men of Namiquipa are going to be drug traffickers in Phoenix, or if the still growing daughters of the farm workers of Villa Ahumada are going to work at the McDonnell Douglas factories en Ciudad Juárez. What we do know is the family's sadness when they have received word that their son has died of a violent death in Kansas, or that he has been incarcerated in Arizona, or that their daughter has been raped in some dark street of this border.

After 10 years of structural adjustment policies, these are some of the effects throughout the nation and in the fields of the state of Chihuahua in northern Mexico:

- Collapse of productivity: In the period 1986-1990, the productivity per hectare fell 25 percent for maize and 20 percent when compared to 1981-1985.

- Migration: Between 1980 and 1990, 16 of the 22 counties of seasonal agriculture in Chihuahua had negative growth rates in their population and only 2 had a more than 1 percent growth rate. In the same lapse of time the economically active population in agriculture, livestock raising, wood production and fishing decreased from 29.7 percent to 17 percent.

- Deterioration of living condition: In 32 of the 67 counties of Chihuahua, all of them rural, the nutrition level is very low; of every 100 children that start elementary school in the rural zone, only 56 of them will complete it. Illnesses long thought vanished, like whooping cough or tuberculosis, have began to reappear. In the rural regions violent death has become the prime cause of death for youth between the ages of 15 and 24.

These effects are not only seen in Chihuahua; in fact they seem to be even deeper in poorer states in central and southern Mexico.

The root of all this deterioration is in the structural adjustement policies carried out by the federal government since 1982, which have translated into:

- Reduction in agricultural financing : in 1992, the Rural Credit Bank (Banco de Crédito Rural), of the government, financed only one fifth of the area financed in 1987. And from 1992 to 1993, Banrural's credit for agriculture decreased by 38 percent. Between 1990 and 1993, in the state of Chihuahua alone, more than 20,000 rural producers were expelled from the banking system.

- Increase in prices of agricultural inputs and elimination of subsidized prices:taking 1978 as a base, the price of diesel increased until 1988 some sixty-eight thousand percent; gasoline, seventeen thousand percent, and tractors, thirteen thousand percent, while the price of maize increased eight thousand percent. The price of electrical energy, only between 1989 and 1993 increased 527 percent.

- High interest rates: in 1987, interest rates on loans to agriculture reached 200 percent per annum. Today, with an inflation rate of under 10 percent, interest rates for agriculture are still between 18 percent and 32 percent annually.

- Lowering of guaranteed prices: For 1990, the price of maize had been lowered 39 percent in relation to the price of 1980 and that of beans had been lowered 27 percent.

- Indiscriminate imports: imports, smuggling, underinvoicing and dumping of basic grains, meat, milk and apples.

All of these policies have conduced to the present situation: the collapse of profitability in almost all of the areas of the agricultural sector, which becomes evident in the bankruptcy of businesses and in the surge in non-performing loans. Since the current Administration took office in Mexico, in 1988, non-performing loans increased from $130 million to $1.43 billion. They jumped by 216% in a year alone. Loans to over 92,000 agricultural producers throughout the country have gone sour, to the point that they have lost their land or filed for bankruptcy. On ground of bad loans, confiscations of assets belonging to those producers increased by 154% from August 1992 to August 1993.

Well, then what are the chances of this heavily beaten and crisis-ridden agriculture to compete against the most developed agriculture of the world? In a separate essay we make a comparison between the U.S., Canada Mexico and Chihuahua in which constitutes the "competitive factors" in the cultivation of maize and beans: natural resources, technology and governmental policies support. The abundance of flat lands, of rain and snow, places the Northamerican agriculture in great advantage in relation to Mexican agriculture. The unstable equilibrium of technological development combined with the factors of agricultural climates make the procutivity per hectare express iteself as the following:

4

	U.S.A.	CAN.	MEX.	CHIH.
Maize	6,957 Kg.	6,240 Kg.	1,732 Kg.	704 Kg.
Beans	1,661 Kg.	1,865 Kg.	542 Kg.	357 Kg.

And, due to the severe control of Mexican agriculture support policies and the drastically diminished subsidies, the costs of production can be compared like this: in the United States, it costs 92.7 U.S. dollars to produce a ton of maize; in Mexico it costs 258.3 U.S. dollars. In the United States, to produce one ton of beans costs 219.5 U.S.dollars, and in Mexico, it costs 645.2 U.S. dollars.

The panorama is not any better in other products: in Mexico, the beef industry has an equivalent of subsidy average of -14 perocent. The milk, in the U.S. has a subsidy of up to 60 percent while in Mexico the "subsidized" has a -100 percent. Throughout the 1980s, milk producers and cattle ranchers lived under what we could call a "negative protection" from the government, because of price controls. Between 1981 and 1990, the producer price of milk decreased 34.5% in real terms. In 1993 the nominal amount of money a producer is paid for a liter of milk is, despite over 60% accumulated inflation, still the same as in 1988. Pork meat in the U.S. has a subsidy of 7 percent and in Mexico, it has a -23 percent.Even without a NAFTA, imports of pork meat from the United States have displaced over 25% of all domestic producers, bringing production down by 40% and driving 4,000 farms (out of a total of 20,000) to bankruptcy. We have some possibilities of competing in tropical fruits and vegetables, but we can not extend our production more than 30 thousand hectares more because we would saturate the North American market.

We will leave it to everyone of you to draw your own conclusions as to the realistic opportunities we have in gainfully competing with your agriculture on a short or medium term.

Well then, what would be the social impact of signing the NAFTA as it is without protecting the Mexican agriculture? In all of Mexico, specialists are taking about "the great population surgery", or demographic cleansing, which would displace 3 million agricultural workers to the city... or the cities of the U.S. with their families and everything, which would implicate 15 million people: just as many as the population of Texas.The most optimistic calculations point out that only 30% of farmers in Mexico would survive. The calculations we have made for Chihuahua is that 95 thousand people will be left without employment, displacing almost half a million and 75 percent of the "ejidos" would be abandoned without activity. Maybe with this government objective of compressing the rural population of 22 percent of the economically active population to less than 10 percent, would be accomplished. Except that downsizing the population is quite a different exercise to trimming inflation. When the current Administration is over in

Mexico, in november 1994, Mexico will have less peasants, less rural producers and only more billionaires.

Beside this, Mexico would lose its nutritional sovereignty : Mexicans get 59% of their carbohydrates and 30% of proteins from tortillas. Should Mexico become entirely dependent on corn imports from the Midwestern states in the U.S., just imagine what would happen in the case of floods like the one in the Summer of 1993. In Mexico, we have 20 breeds of corn, which have evolved over a period of one thousand years. Those farmers that are technologically more advanced in Chihuahua, are now facing viruses and plagues in their farms, due to the fact that they imported contaminated seeds from the U.S. It would destroy the inmense cultural and ethical reserve that represents the familiar rural agriculture and would leave enormous investments not only to create in the cities the jobs lost in the fields, but to build an infrastructure and public services for the millions of displacced people.

Finally, the urgence to find competitive alternatives will make less profitable the sustainable agriculture, which would conduce further more exploitation or our natural resources.

Members of the U.S. House of Representatives: we urge you to consider and ponder with responsibility all of this data. You are the first representatives that have consulted with us over NAFTA, while in Mexico the representatives never came to us. If we are going to sign a Free Trade Agreement in our countries, it should include protection for family farms, not including in it basic grains, nor the oil seeds, nor meat or milk. It should create compensatory funds for the development of producers of the poorest regions, to conserve employment in their lands and to live with dignity.

Honorable Members of the U.S. Congress: several producers of milk, corn, apples were to come to Washington to participate in this hearing. They are not here because as we are talking they are blocking the Zaragoza bridge between Ciudad Juárez and El Paso, Texas. Myself, I literally jumped from my sleeping bag in the blockade to the airport. Demonstrations and protests like this one have mushroomed in Mexico in the last six months. In 18 out of the 32 states of our country, even middle-income rural producers are mobilizing against the very difficult conditions they face to work. Producers of sugar cane, melons and tomatoes of Jalisco invaded downtown Guadalajara with 300 tractors; cocoa producers from Tabasco and malt producers from Tlaxcala have been in a sit-in in the main square of Mexico City for several weeks; in Sonora, formerly wealthy producers have stormed the office of the Department of the Treasury of the federal government; in Chihuahua, producers of milk, apple, peppers, cattle ranchers, etc, have occupied bank offices, given away tons of apples for free, burnt tractors and corn, closed highways, and now they are blocking the international bridge.

These are all unprecedented actions; at least in their current dimensions. Poor and rich farmers have coalesced, from the left, the center and the right; from the center, the south and the north of the country. Whole towns have raided the banks in support to their local farmers, as it happened in Nuevo Casas Grandes, in Chihuahua. Their basic, fundamental demand: that major changes be introduced in economic policy in such a way that agriculture could become a profitable activity again. We are all pushing for the government to put pressure on the banks, in order that they will renegotiate non-performing loans in fair terms, instead of taking over our land. We must stop the financial oligarchy entrenched in the banking system from confiscating our assets, which we have acquired as the product of our work over several genertions. The Mexican government must put an end to indiscriminate imports and bootlegging of agricultural products.

All this unrest, all this frustration of small and mid-size farmers will not be placated if NAFTA is ratified in its current terms.

Honorable members of the U.S. House of Representatives: a month ago, milk producers in Chihuahua spilled on the streets nearly eight thousand gallons of imported U.S. milk. It was the "Chihuahua milk party". This recent event in our history may have something in common with a similar episode in your history, and compels us to think together about our common future. We cannot think about the integration of our economies as we fail to observe the democratic values that we both cherish. It is not adviseable to support an agreement which will only benefit big producers, and which will crush and exclude the aspirations and the productive effort of millions of small and medium businesses in our two countries.

Democracy in the United States was built upon the struggle of small producers and the local communities against the economic impositions of the empire; democracy in the U.S. was also inspired by the aim to achieve freedom of trade for the majority of the population, and not only for a privileged few. It these beliefs guide your vote on NAFTA, those of us who want a dignified, better life for our children and a democratic future for our countries will be forever grateful to you.

THE IMPACT OF SAPS ON AGRICULTURE IN CHIHUAHUA

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A. BACKGROUND

1. Mexican Agriculture

The mountainous terrain of Mexico and its arid climate make farming difficult. However, agriculture has historically played a key role in Mexico's social, political and economic development. Today, the future of the agricultural sector is at the center of the development debate.

On the eve of the Mexican Revolution, 70% of the arable land in the country was controlled by 1% of the population.[1] In theory, the rights of peasants to control and farm the land was a fundamental goal of the Mexican Revolution. In practice, peasants gained political leverage in the decades following the revolution, but continued to be economically marginalized.

Land reform following the revolution established "ejidos" which are communally held plots of land, which are controlled by the farmers themselves, but which can not be sold or transferred. (This was an attempt by the government to avoid the re-concentration of land through purchases of ejidos by large landowners.) Although agrarian reform established 28,000 ejidos, benefitting 3 million families, it is estimated that 85% of the land distributed between 1952 and 1982 was not arable.[2]

Aided by the protection of general subsidies and guaranteed prices, peasants have managed to subsist on these marginal lands, but with relatively low levels of productivity. Meanwhile, large government investments in irrigation and new technologies have generally concentrated on large export-oriented producers. "Ejidos occupy 43% of Mexican farmland and comprise well over 60% of the nation's farmers. Yet they produce less than 10% of the country's output."[3]

This dual strategy was politically successful for decades. Peasants were organized under the PRI, and have had a mechanism to present complaints and sometimes see results. As long as their basic needs were addresses, the fact that the government was investing more and more money into the export sector was accepted. Thus, the increased emphasis on export production as part of adjustment in the eighties, in and of itself, dos not represent a major departure from previous policy. However, the new emphasis on the modernization of the entire countryside - including peasant and ejido farms - is a dramatic shift, because it means the elimination of a decades-long strategy of supporting small scale producers of

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basic grains for the domestic market.
During the eighties, the relative economic importance of the agricultural sector (as a percentage of GDP) has declined, but the social and political ramifications of the new agricultural policies are enormous.

2. Chihuahuan Agriculture

The state of Chihuahua encompasses 24,706,700 hectares, of which approximately 1,250,000 are used for agriculture. The population was estimated at 2,441,873 in 1990. About 17% of the economically active population participates in agriculture.

Rain-fed agriculture in Chihuahua is dedicated primarily to the cultivation of corn and beans, two staples of the Mexican diet. The peasants generally grow these crops for self-consumption and to supply the urban population in the city of Chihuahua. Rain-fed agriculture accounts for three quarters of the agricultural land of the state, and employs approximately 137,235 people - 103,162 of whom are ejido producers and the rest small land owners. Although rain-fed agriculture accounts for only 20% of total agricultural production and 12% total agricultural value in the state, it continues to provide jobs for 17% of the economically active population of the state, as well as staples for the residents of the cities of Chihuahua.

Over the past three decades both corn and beans have experienced drastic fluctuations in levels of productivity. During the sixties and the first half of the seventies there was a surge in production of both grains. However, in 1975, following bad seasons and reduced real guaranteed prices, the production of both crops began to fall. In their place, much of the land was converted to pasture or dedicated to the cultivation of oats and corn for livestock.

Beginning in 1980 the production of corn and beans was prioritized by the federal government, and in 1981 Chihuahua had a record year in both products. With the economic crisis and the initiation of adjustment measures in 1983, however, government support for this program was reduced and corn and bean production again began to fall. A fall in the real price of corn and beans, an increase in input prices and a reduction in producer credit have driven many of the local campesinos to shift to livestock raising, which is more profitable.

The changes in Article 27 of the Constitution approved in December of 1991 establish the end of land redistribution by the state; allow corporations to legally buy lands on their own or through association with ejidos; and allow for the division of ejidos and their conversion into private property. According to agricultural

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economist Jose Luis Calva, the driving force behind the proposal to change the Agrarian Law was the desire to open up ejido land for business as part of the modernization of the rural Mexico.

Corporate ownership of rural lands paves the way for the concentration of land. Already three of the largest agro-businesses in Mexico (Delmonte, Herdez and Anderson-Clayton) have begun buying up ejido land in central Mexico. Foreigners can own 49% of the lands and 100% of capital on these farms.[4]

The Frente Democrático Campesino de Chihuahua (Campesino-Democratic Front, a federation of corn and bean producers which groups around 3000 affiliates) is one of the most important independent organizations in northern Mexico. It was formed as a result of the success of strong social movements organized to demand increases in the guaranteed prices of corn and beans in the mid-eighties.
The FDC has responded to the adjustment policies that hurt the peasants by organizing at the grassroots level to counteract official policies with their own proposals. In recent years, the Frente has been successful through the mobilization of its membership and other popular organizations, in exacting credit from the the rural development bank (Banrural) and support from the social investment fund (Pronasol).

B. STRUCTURAL ADJUSTMENT POLICIES IN CHIHUAHUA

Although adjustment has proceeded more slowly in the agricultural sector than in other areas, by 1992 the Salinas administration had utilized a variety of adjustment policies to transform the agricultural sector into a more efficient producer for the international economy. Mexico received an Agricultural Sector Loan (ME-2918) from the World Bank in 1988 that guided agricultural reforms for 2 1/2 years. The overall objectives of the loan were:

> 1) To remove global food subsidies and target remaining food subsidies to the poor; 2) to reduce government intervention in agricultural markets, including movement from guaranted prices for grains...towards market-determined pricing; 3)abolish export controls and quantitative restrictions on key products; 4)reduce the role of agricultural parastatals; 5) liberalize agricultural trade 6) cut subsidies to inputs 7) better the efficiency of puiblic investment in agriculture and raise it in real terms; 8) decentralize and cut staff of the agricultural ministry.[5]

In addition, many of the policies most directly affecting Chihuahuan corn and bean producers were part of other sectoral loans. For example, a finanical sector loan sought to reduce subsidized credit from development banks; a trade liberalization loan sought to reduce tariffs on agricultural imports; and a

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fertilizer sector loan required the internationalization of fertilizer prices.[6] Together, these loans have led to a comprehensive restructuring of the agricultural sector.

This study will analyze the effects of four principle adjustment policies on corn and bean producers in Chihuahua:

* The reduction of credit
* The elimination of subsidies on inputs
* The elimination or reduction in guarantee prices (which the government applies to basic foods)
* The liberalization of trade

The study illustrates a variety of ways in which SAPs have affected Mexican (and Chihuahuan) agriculture: they have stimulated the production of large-scale export crops; they have reduced support for the production of basic foods; they have increased the costs of inputs while at the same time decreasing the price of basic grains; they have promoted a shift to cattle ranching in the north; and they have stimulated migration to Mexican cities and to the United States.

1. Reduction of Credit

One of the most important components of the adjustment policy related to the agricultural sector is the reduction of credit for the production of basic grains and for regions considered to be less productive. These reductions weren't immediate, given the political conflicts that would have arisen. The federal government has gradually phased out Banrural credit in exchange for much lower levels of Pronasol credit. Because the Pronasol coverage is severely limited, peasants are forced to find alternative forms of financing. However, there seems to be a general consensus among FDC farmers in Chihuahua that Pronasol credits are much better than Banrural because they don't have to pay interests on the loans. They also say that Pronasol is much more efficient than Banrural.

According to Alejandro Vazquez,

> " With the credits from Pronasol, since they don't cover all of our expenses, we have to find money in other ways: we cut wood to sell, fish in the river, or sell cows and pigs...Pronasol is very good: they lend to us without charging interest, and if we pay on time we can solicit the money to fix our machinery or buy animals. Banrural lent a more money, that's for sure, but in the end with the interests, you'd end up more broke than before. Banrural made us run around in circles and the credits always arrived late."[7]

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According to the General Director of Banrural, between 1980 and 1988, total credit to the countryside was reduced by almost one third (nationally).[8] Until 1989, Chihuahuan rain-fed agriculture had been spared reductions in Banrural credit. Between 1983 and 1989 the area covered by Banrural credit for planting corn rose from 199,000 to 234,000 hectares in the state of Chihuahua. But in 1990, upon the initiation of the the government's modernization program of the countryside. Banrural reduced its credit coverage from 300,000 has. to only 100,000 has. of rainfed areas. More than 10,000 Chihuahuan peasants lost their agricultural credit, and had to rely on the support of Pronasol.[9] In 1992, Banrural agricultural credits in Chihuahua amounted to 114.7 billion pesos and covered 82,000 hectares, when in 1989 they were 158 billion pesos and covered a total of 315,000 hectares. Thus, Chihuahua has witnessed close to a 75% reduction of the land area covered and a reduction of 37% in total financing in the past three years.[10]

Nationally, the reductions have been even more drastic. The total number of hectares receiving credit from Banrural between 1987 and 1992 fell from 7.5 million to 1.3 million. Between 1982 and 1993 the number of producers receiving credit from Banrural fell from 2.5 million to 500,000.[11]

In 1992 Pronasol support covered only 130,000 of the state's almost 900,000 hectares of rain-fed land. In addition, while the per hectare cost of corn production has risen to 800,000 pesos, the credit from Pronasol is limited to 350,000 pesos per hectare and 6 hectares per producer.[12] In other words, a corn producer in the rain-fed zone of Chihuahua that in the past would have received a credit of 800,000 pesos per hectare for an average of 12 hectares planted (9.6 million pesos) now receives through Pronasol a maximum of 350,000 pesos per hectare for 6 hectares (2.1 million pesos): almost 80% less than what is required..

Faced with such drastic cuts in credit, the peasants of Chihuahua have been forced to seek alternative forms of financing to supplement Pronasol credits. Each family has its own strategy: sending various family members to work in the city or in the United States; sale of livestock; etc.

According to Rosa Valverde,

> "Between my husband and the children, we have 38 hectares and we rent 15. The only credits we have we get from Pronasol, thanks to Frente Democratico Campesino, but it only covers 10 hectares. The rest we have to finance selling cows or with the money that one of my children who recently went to the United States sends us."[13]

Mr. Gabino Ortega says that they had credit from Banrural, but they

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had to stop borrowing because the interests were too high. Therefore, the only credit they have now is from Pronasol: 350,000 pesos for 20 hectares. With this they can't finance their entire crop and they have to get additional financing through private loans:

> "When I worked with Banrural credit, they lent me 6 million and, with the interests I had to pay back 15 million. Now I'm better off because Pronasol doesn't charge interest. Although they lend me much less, I end up owing much less too..."[14]

Pronasol financing, while clearly more popular than Banrural, is far from a solution to the peasant's financial problems. The credit is enough to keep the peasants on the margin of subsistance, instead of seeking to maximize the potential of traditional agriculture.

> "If Pronasol stops giving us credit, we will have to grow only for our own consumption. We can dress ourselves...only because our relatives that live in the United States give a used clothing..."[15]

2. Elimination of Subsidies on Inputs

i. Fertilizers, Seeds, Fuel

Accompanying the sizable reduction in financing for cultivation, there has been a reduction in subsidies on inputs including fertilizers, seeds and fuel. This contributes to reduced yields, because the peasants can no longer afford the best inputs.

Until recently the government was the principle provider of fertilizers and improved seeds, through the state businesses of Fertimex and Pronase. It was obligated, however, by the World Bank, to implement a policy of "realistic prices" and eliminate or reduce these subsidies. The prices rose both in relative and absolute terms. In addition, the Mexican government decided to go beyond World Bank conditions and privatize Fertimex.

As part of the conditions of the Fertilizer Sector Adjustment Loan (2919-ME), the government was required to increase the price of ammonia paid by Fertimex to Pemex to 40% of export parity, and to increase the price of sulfate to export parity.[16] In fact, the new pricing system introduced in October 1991 set all Fertimex prices according to international levels.[17]

It is too early to know how the new pricing policy will affect purchases. However, the prices of fertilizers had been increasing before these changes, and appears to have had an affect on domestic

purchases. Between 1984 and 1987, the price of ammonium sulfate increased 1477% and the price of potassium sulfate increased 2544%, while in the same period average guaranteed prices only rose 544%.[18] In Chihuahua this led to an abrupt decline in the sale of fertilizers: in 1982 195,843 tons of chemical fertilizers were sold; in 1983, only 150,770 tons. It wasn't until 1987 that sales recovered to 1982 levels, but they fell again in 1988 to 175,252 tons.[19]

Sales of improved seeds have also fallen, as Table No. 4 illustrates. This is likely the result of the increase in the price of corn and bean seeds ....

In the case of the 912 ejidos, only 310, roughly third of them, use improved seeds and 472, a little more than one half, use herbicides and insecticides.[20] The price of fuel has also skyrocketed. Between 1978 and 1988, the price of diesel rose 68,461%; that of gasoline rose 17,607% and that for agricultural tractors, 13,163%; while the guaranteed price of corn in the same period rose only 8,448%.[21]

The "realistic price" policy and the elimination of subsidies promoted by structural adjustment has had direct repercussions on the increased price of fertilizers, improved seeds, and fuels used in agricultural production. The costs of production are increased substantially or else yields are reduced. Since Chihuahuan peasants are already suffering from credit reductions, many can no longer afford to use improved seeds or fertilizers. Not only peasant production is affected, but so are agro-businesses, reducing their ability to compete with foreign agricultural products, which are even cheaper to import now, given the new trade policy.

In conjunction with the increase in the price of inputs (fertilizer, seeds, fuel) the cost of fixed investment goods has also been increasing. This has led to a deterioration of agricultural equipment and infrastructure: tractors, tools, granaries, stables, etc., since there aren't funds for their replacement.

There are very few statistics about the process of decapitalization among campesinos in the rain-fed regions. At the national level, between 1975 and 1982 the use of tractors rose by 55,220 units. But between 1983 and 1988 it contracted by 7,746 units. Chihuahua is one of the states with the highest rate of tractor use - the state average is one tractor for each 53.6 hectares of cultivated land, while the national average is one tractor for each 139 hectares. However, here too, the crisis and the politics of adjustment have contributed to decapitalization.

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The general feeling among the campesinos is that their machinery is continuing to deteriorate, and they don't have the resources to repair it. A good part of this machinery has been acquired used from producers in the United States:

> "The only new tractor that we've ever had we bought in 1962. The last tractor we bought, we brought from the United States, very cheap, because it was already almost broken down. We bought it three years ago..."[22]

A good part of agricultural instruments are produced in Mexico. However, they are much more expensive than those produced in the U.S. Therefore, peasants that live closer to the border, like those of Chihuahua, have greater possibilities of acquiring used implements at low prices in the U.S. and then (generally smuggling them or through a bribe to the customs officials) import them without having to pay tariffs. In early 1993, the federal government declared the border totally open for imports of agricultural inputs and tools, which gives Chihuahuan peasants access to cheaper products (including tractors). However, they still lack the resources to purchase new goods.

3. The Fall in Guaranteed Prices

Guaranteed prices are fixed by the federal government and are effective throughout the country. Since 1981, guarantee prices have been eliminated on all products except corn and beans, which have seen their prices decline. This deterioration of real guaranteed prices for corn and beans has also played an important role in the fall in production and productivity of basic grains.

Although the World Bank sought to include corn and beans in the agreement to eliminate guaranteed prices on grains, the government considered:

> "the risks of liberalization [of corn and bean prices] to b too great at a creitical period of its economic adjustment, especially as the cuts in food subsidies were already known to have affected the poor most severely."[23]

Although guaranteed prices recuperated some of their losses between 1987 and 1990, they still experienced a real decline of 39% in the case of corn and a 27% decline in the case of beans between 1981 and 1990.[24]

The deterioration of prices has the most severe affect in regions with lower yields, like the rain-fed zone of Chihuahua. Between 1985 and 1989, the average national yield from one hectare of corn was 1,732 kilos, while in Chihuahua it was only 704 kilos. In the case of beans, in the same period the average national yield was

542 kilos and that of Chihuahua was only 357.[25]

With the reduction in guaranteed prices, the lower average yields per hectare in both grains makes their cultivation even less cost-effective relative to other regions, like Jalisco. This explains in part the force of the campesino movement in Chihuahua demanding an increase in guaranteed prices in 1983, 1985-86, and 1987-88.

Guaranteed prices for corn and beans will disappear soon, being replaced by "agreed prices", established by supply and demand more than anything. The combined effect of the fall in guaranteed prices and the increase in the prices of inputs has been a serious decline in the terms of trade for the agricultural sector, above all for peasant producers of basic foods that have not been able to make up for these losses with greater productivity.

> "The corn and beans that we harvest, we sell to CONASUPO, who pays us the price fixed by the government. The avena we have to sell on the free market since it doesn't have an official price, and the ranchers pay us very little for it."[26]

Although the guaranteed prices for corn and beans have been declining, they are still above international prices. The Chihuahuan producers depend on these price guarantees in their planning. The fluctuations in the market prices of basic goods would make economic planning very difficult.

4. Trade Liberalization

Mexico has previously sought food self-sufficiency, which partly explains the state's support for the production of basic grains. The new modernization policy under the Salinas administration stresses food sovereignty, which is understood as the ability to purchase the amount of food necessary to feed the society (instead of the ability to produce it). Thus, through trade liberalization and an export-oriented agricultural strategy, they seek to earn enough foreign exhange to import the basic foods that aren't produced nationally. These imports should be cheaper than these goods would cost if domestically produced, thus saving money. On the other hand, it requires the use of scarce foreign exchange and contributes to a growing trade deficit.

Trade liberalization has had both positive and negative effects on the peasants of Chihuahua. The reduction of import tariffs has meant a surge of cheap imported basic grains, that the farmers can't compete with. On the other hand, it has paved the way for cheaper imports of inputs which benefits producers. Because the farmers were previously enjoying subsidized inputs, however, cheaper imported inputs often don't make up for price increases

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In 1990, Mexico imported ten million tons of food, which represented 33% of total domestic agricultural production.[27] Between 1986 and 1990, the value of agricultural imports (basic grains, oils, fruits and vegetables) rose from $788,843,000 to $1,829,928,000 (more than doubling). In 1988 and 1989, food imports represented more than half the value of all oil exports from Mexico and in 1990, they represented more than one third the amount saved in debt renegotiations.[28]

In addition, the primary sector trade deficit continues to grow. In 1992, the value of Mexican food exports fell 18.2% while the value of food imports increased 44%.[29] The agricultural deficit in 1991 was $1.4 billion. Between 1989 and 1992, agricultural imports rose 62.2%, while exports grew only 32.9%, contributing to the rapid increase in the trade deficit from ($2.6 billion in 1989 to $18 billion in 1992).[30]

Part of trade liberalization involved the removal of export permits for beef and live cattle and the reduction of cattle export taxes. This has led to an increase in cattle ranching in Chihuahua, because exports are more profitable. In fact, the effort to increase agricultural exports failed in the first few years after the agricultural sector reform loan. The value of agricultural exports actually declined from 1.53 billion in 1988 to 1.31 in 1991.[31] However, the exception to this was live cattle exports, which grew in value from $200 million in 1988-89 to $350 million in 90-91.[32]

The NAFTA negotiations agreed to continue protection for corn and bean imports for a period of 15 years, because of the extreme damage that would be done to producers if tariffs were eliminated immediately. However, without a strategy for either increasing the productivity of these producers or for changing crops, the same effect will take place, only at a slower rate.

> "If corn and beans enter into the North American Free Trade Agreement, we won't be able to compete. Alot of people will have to go to the city and only a few will stay in the countryside to care for the old folks. Alot of land will be sold because it won't be profitable to grow our crops. But that isn't going to help, because then the capitalists will arrive and buy the lands and, since they'll be the only ones who produce, the prices will go up again."[33]

C. THE GENERAL IMPACT OF ADJUSTMENT ON CHIHUAHUAN SOCIETY

All of these policies affecting peasant farmers in Chihuahua have led to decreased production and productivity, demographic changes, the concentration of land, and a general reduction in the quality of life in Chihuahua. The vicious cycle is repeated:

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decapitalization-low productivity-decline in income-deterioration € living standards-migration.

1. Changing Demographic Profile

The effects of adjustment can be seen in the changing profile of the population of Chihuahua - primarily in the state's urbanization. There are 22 principal municipalities of rain-fed agriculture in the state. In 1980, they accounted for 15.8% of the total population of the 67 Chihuahuan municipalities. By 1990, their population had declined to 13.8%. In this decade, 16 of these 22 municipalities had negative growth rates and only two grew above one percent. The municipalities of Juarez and Chihuahua, where the maquiladora industry is concentrated, had growth rates of 3.6% and 2.8% respectively during this period. These two municipalities grew from 48.3% of the state's population in 1980 to 54.4% in 1990.[34]

The primary sector (agriculture, livestock, fishing) declined from 24.72% of the total economically active population of the state in 1980 to 17% in 1990. During this same period, the number of landowners in the primary sector fell more than 50% from 6,699 to 3,188.[35]. Currently the primary sector employs 131,610 people. This quantity represents practically the number of jobs that the maquiladora industry created in Chihuahua between 1981 and 1990, growing from 47,187 to a little more than 170,000.[36]

Gabino Ortega explains, family members are forced to go to the city to look for work, but this in turn creates more financial problems on the farm, because they lose free family labor.

> "When the agricultural year is bad, we leave to look for "la gorda/tortilla" in the city, or on the Other Side [the United States]. My daughters, who work in the maquiladoras in Chihuahua,, are the ones in charge of sustaining the family....
>
> Before I was a good producer, now with all these problems and with the fact that I can't put more money into the harvest, I'm doing bad. The little money I have, I have to pay to the workers. Before, my family helped me more, they were all on the farm...since nearly all of them went to work in the city, I have to contract workers and here in the region they charge alot..."[37]

The promotion of the maquiladora industry, which began before the crisis, but has been reinforced by adjustment, along with the elimination of economic stimuli, subsidies and government investment in the countryside, has led to a concentration of the Chihuahuan population in the large cities of the state, a decrease

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in the rural population, the bankruptcy or the closing of agricultural businesses and the concentration of agricultural land and production. The "pull" effect of the maquiladoras, added to the "push" effect of the fall in agricultural profits has changed the demographic profile of the state of Chihuahua, and contributed to the rapid ubanization of the country. What's more, it is becoming more and more difficult to find a family that doesn't have at least one relative working in the United States and sending money home.

"My husband is always here during planting season, but the rest of the year he spends working in the United States. He and four children in Texas, Florida, Colorado and New Mexico support all of the family expenses and they take turns helping with the planting. When we are short of money, my husband and my children are contracted to pick calentones in the apple orchards or to do some other work in the countryside."[28]

2. Reduced Production and Productivity

The productivity of corn and bean producers in Chihuahua has declined as a result of the various adjustment policies outlined above. Thus, their chances of competing internationally continue to decline. It is clear that the government is attempting to slowing force them out of corn and bean production. However, as of 'et, no alternative has been offered.

The total cultivated area in rain-fed agriculture depends in large part on the annual rain fall. Producers usually alternate between corn and bean production, depending on the rains. Therefore we have calculated both the area planted and the tonnage produced for each of the grains (see Table 6) To better observe their evolution, we have grouped them into two periods (1981-1985 and 1986-1990) in Table 7.

Grouped in five year periods, the figures are very telling: between the first period (which coincides with the debt crisis, and the initiation of austerity and structural adjustment policies) and the second period there is a substantial decline in all areas except for the average annual area harvested of beans.

Not only did the production of these two basic grains decrease in absolute terms, there is also a marked decline in the productivity (the relation between the area harvested and the total production).

The productivity of corn production fell close to 25% from one period to the next, while that of bean production fell 20%. There is a direct link between the decline in production and productivity levels on the one hand and economic crisis and the politics of structural adjustment on the other. The drastic reduction of

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financing for the countryside, the increase in prices of inputs, the decrease in the price of staples and the decapitalization of Chihuahuan agricultural producers have all played a role. They have generated a fall in the total cultivated area of rain-fed land and in the volume of total production of the two most important basic grains produced in Chihuahua: corn and beans. They have also decreased productivity per hectare. This is the result of the fact that less fertilizer and chemicals are applied because they are more expensive; there are less resources available for agricultural machinery; and high yielding seeds are not affordable.

3. The Standard of Living

It is difficult to measure a change in the standard of living over the past ten years, because there have not been enough studies done to compare over time. In general, more services ar ebeing brought to rural areas as the country develops, but that doesn't necessarily mean that they are reaching the poorest sectors.

> "If we didn't work together and cooperate as a family, things would be even more difficult... We must count on the support of parents, children and relatives that go to the United States."[39]

Of the 912 ejidos, only 418 have electricity and slightly less than half, 449, have running water. Only 155 have access to paved roads while 834 have dirt roads.[40]

Education

Although primary education covers more than 90% of rural demand, the drop out rate is very high. At the state level, only 57 out of every 100 children that began their primary education in the 1980-81 cycle finished it in the 1985-86 cycle (the expected completion period). This percentage differs drastically between urban and rural zones. In the urban areas, 70 of every 100 children finished primary; in the rural areas, only 45 out of every 100 did.[41]

Health Care

It is very difficult to provide health services in the rural zones, given the dispersion of the population and the long distances between towns. In 32 of the 67 municipalities in the state (the vast majority of them rural) the nutritional profile is "critical". Malnutrition among the preschool population in the rural areas reaches between 30 and 40%. In some areas of the highland region, between 80 and 90% of the indigenous population has reached the most severe levels of malnutrition. According to the Chihuahuan Institute of Health, diseases like tuberculosis and whooping cough that had virtually been eradicated from the rural Chihuahuan area

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have reappeared. Between 1987 and 1989, 816 Chihuahuans died from nutritional deficiencies, an increase of 14% in relation to the previous 3 year period. Those most affected by these problems live in the rural and indigenous zones, 60% of which lack any medical services.[42]

In general, the deteriorating economic situation for peasants in Chihuahua is accompanied by a deterioration in the social situation, although we can not prove a causal relationship.

The social disintegration and violence brought about by narco-traffickers, police forces, and the lack of jobs have had a strong impact in the rural zones of Chihuahua, above all in the Sierra. This is where the majority of human rights violations occur: murders, torture, arbitrary arrest, arson, etc. This has severely upset and deteriorated the social fabric in the countryside of Chihuahua. In the Sierra, violent deaths are the number four cause of death in general and homicides are the principal cause of death between young people 15 to 24 years old.[43]

If the economic crisis and economic adjustment have produced a deterioration in living standards and an increase in poverty in Mexico, this has been even more serious in the countryside. It is among the peasants of Mexico and Chihuahua where we see the lowest indices of schooling, health and public services; it is where the rates of illiteracy, malnutrition, infectious diseases and housing without services are highest.

The National Solidarity Program (Pronasol) encompasses all social policy under the Salinas administration. Its fundamental objective is to combat poverty and promote social participation as a prerequisite for the modernization of the country. In Chihuahua, Pronasol has been most visible in its role as a provider of no-interest credit to the corn and bean producers.
However, it is also involved in community development projects. What is missing is a concerted effort, through Pronasol or any other agency or institute, to work with the peasants on an alternative development strategy for the future.

It is interesting to note that the federal agriculture budget rose from $503 million in 1988 to $864 million in 1990. In fact, one of the conditions of the World Bank agricultural sector loan was a $200 million increase in the agricultural budget between 1988 and 1989 (which wasn't met). Thus, the government is putting more money into the sector as a whole, but less of it is reaching the corn and bean producers in Chihuahua.

While the World Bank acknowledges that there have been "dramatic reforms" in agriculture since 1987, they insist that reforms must be deepened.[44] One of the areas they sight as needing to be

addresses is corn and bean production. Thus, we can expect the situation of the FDC producers to deteriorate further in the coming years, as there is more pressure on the government to eliminate guarnateed prices all together.

ALTERNATIVES

> "The solution to all of this is that the government pays attention to the countryside..."[45]

The overall difficulty for the FDC producers is that their products are not internationally competitive. However, due to the nature of the land and the lack of rains, there are few crop alternatives. Officials at the World Bank recommend that these producers move on to more produtive activities or crops "like strawberries."[46] Aside from the fact that strawberries can not be competitively produced on these lands, such a transition would require financing, training, and technical and marketing assistance. There is very little government support in any of these areas.

According to Alenjandro Vazquez,

> "We have never received any technical assistance or advice from anyone. We only want to find the way to improve our crops." [47]

Without comprehensive programs to assist in the restructuring of economic activity, current economic policy will only lead to increased poverty and migration to the cities.

Because there are no crop alternatives and because of their belief that the production of basic grains for the nation is a valuable (if not profitable) productive activity, the Frente Democratico Campesino promotes the continuation of corn and bean production in the rain-fed areas of Chihuahua, but in a different manner. They recommends the following policies:

1. Democratization

A substantial reorientation of federal government policies is necessary in order to preserve and enhance development possibilities for peasant producers.

A basic prerequisite for the reorientation process is the democratization of the ejido, the neighborhood, or the indigenous community, as the necleus of peasant life... We must put an end to the corporativist policies of the official party, which considers ejido and communal producers as their natural base of operations.

Concretely, this means that different peasant communities, whatever

their legal status, ...the econcomic, productive, political and sociocultural policies en su medio. That they are the protagonists of all the decisions that affect them.

2. Government Investment

There must be a recognition that there is a role for the state in assisting the peasants of Chihuahua, whose families have produced corn and beans for centuries, to incorporate themselves into the economic, political and social life of the country.

There must be significant government investment in rural infrastructure, above all in auxilary irrigation projects and means of capturing and retaining water. Auxilary irrigation refers to back-up irrigation projects that are only used in the case of late (or no) rains. This could significantly reduce the negative impact of bad seasons or late rains on production.

Although there is a consensus that Chihuahua lacks the water resources for large, new irrigation projects, the fall in the budget of the state agricultural agency has had a direct impact on the reduction in the digging of wells, construction of small irrigation projects, construction of tajos and presones, etc. These types of projects, which don't require a great deal of investment but could substantially improve peasant production, have been cut back. There are no available statistics on this, but the peasants say that when they ask the government to dig a well for them, their request is always denied. Often the reason given is that it is "prohibited" in that zone. However, when a rich producer wants to dig a well with his own resources, the prohibition no longer exists.

3. Financing

It is urgent that the government broaden financing for the cultivation of basic grains, above all, for corn and beans. New forms of finanicng should be developed that poor peasants can take advantage of without the high costs of financial intermediation. The most adequate way of achieving this seems to be support for the formation of savings accounts, organized and administered by the peasants themselves, with funds supplied by the government, non-governmental institutions and the producers themselves. In fact, the government appears to have decided to try this method of financing, beginning at the end of 1993. Direct cash transfers to bank accounts carries some risks as well, but the FDC looks forward to the implementation of this plan.

4. Subsidies and Guaranteed Prices

Subsidies must not disappear; they exist even in the most advanced

economies. The FDC thinks that the cultivation of basic food for the country should be subsidized in diverse ways, for example lower interest rates and extended repayment periods. We also ask that fertilizers and other inputs are subsidized.

The prices of peasant products must be increased significantly to improve the standard of living of peasant families; to achieve food self sufficiency and sovereignty, and to reactivate rain-fed agriculture. To avoid a crash in the prices of basic grains, above all corn and beans, these must not be included in the NAFTA. What's more, the government must maintain CONASUPO [the government agency in charge of purchasing basic grains] active and ensure that it continues to carry out its function as a buyer of basic foods and a regulator of the market.

5. Training

It is necessary to support the development of technologies and appropriate seeds to increase production and productivity on the lands that are dedicated to the production of corn and beans. Research and agricultural extension services, which have been cut back under adjustment, must be reestablished. Also the ties between research centers and producers must be strengthened so that peasants have access to the latest technologies.

6. Rural Integration

Peasant families in the rain-fed areas of Chihuahua need support so that they can carry out a more intensive and integral productive activity, ensuring both an adequate level of nutrition and the generation of an initial surplus for the establishment of artesenal agroindustries??. The economic activity of the region must be diversified, including: cattle ranching de transpatio can be promoted, family orchards, the elaboration of conservation and embutidos, and all the practices of this type that the communities have been losing.

Given that cattle ranching for beef or milk is one of the few profitable activities in the rain-fed zones of Chihuahua, the government should assist peasant families with light credits and with support to build a minimum of infrastructure for ranching. Also, strong investment in conservation and improvement of lands and pastures is needed.

Currently ejido and the communal pasture lands are monopolized by a few rich ranchers. For very little money per year, they saturate the lands with animals, provoking the overuse and erosion of lands. The government must take decided action to ensure that there is a just distribution of pasture lands that, at the same time, would contribute to the recuperation of lands.

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7. To keep the population in rural zones, it is imperative to generate jobs through agro-industries. A good part of the young labor force in rural Chihuahua already has experience in industrial work. Both public and private assistance and investment is necessary for feasibility and development studies on productive projects tied to primary production of the region. The government must support peasants with sufficient technical advice so that they can engage in profitable productive projects and can weigh different options for productive reconversion.

8. The government and peasant communities must cooperate for a more sustainable exploitation of natural resources and for increased productivity that not only doesn't harm the environment, but that contributes to land conservation, reforestation, and la regarga de mantos acuiferos. In other words, the promotion of a sustainable development that leaves future generations a natural resource base and a much better landscape than what we enjoy now.

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Table No. 2: Banrural Credit to Rain Fed Corn and Bean Producers

	Corn		Beans	
	Curr. Pesos	'78 Pesos	Curr. Pesos	'78 Pesos
1982	14923	4915.3	4455	
1983	20359	3321.7	4897	
1984	38125	3759.5	7419	
1985	80097	5007.0	16018	
1986	146914	4931.3	45275	
1987	322999	4676.7	104835	
1988	715758	4839.1	251751	
1989	717619	4042.8	193892	
1990	259998	1156.5	119021	
1991	274172	994.23	113716	

Table No. 3: Prices of Certified Seeds (thousands of pesos per ton)
1982 - 1992

Year	Corn		Beans	
	Curr. Pesos	'78 Pesos	Curr. Pesos	'78 Pesos
1982	33.5	11.03	36.0	11.86
1983	72.5	11.83	42.0	6.85
1984	105.0	10.35	63.0	6.21
1985	140.5	8.78	96.5	6.03
1986	240.7	8.08	261.6	8.78
1987	536.5	7.77	812.6	11.11
1988	1728.0	11.68	1677.4	11.34
1989	1800.1	10.14	2418.7	13.63
1990	2275.0	10.12	3500.0	15.57
1991	5728.5	20.77	5460.7	19.80
1992	5740.3	18.31	5495.8	17.53

Source: Elaborated by the Author with INEGI statistics (Cuarto Informe del Gobierno de Carlos Salinas de Gortari, p. 158).

Table No. 4: Sales of Certified Seeds for the Spring-Summer and Fall-Winter Agricultural Cycles (in tons)

	1983	1984	1985	1986	1987	1988
TOTAL	8,137	4,965	5,253	3,312	3,592	3,835
Corn	402	127	152	125	252	313
Beans	180	15	88	24	50	57
Wheat	6,804	4,688	3,998	2,801	2,690	2,464
Others	751	135	1,015	362	600	1,001

(Source: INEGI, The Agricultural Sector in Mexico, 1990, p. 64)

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Table No. 5: Evolution of guarantee prices for corn and beans 1981-1990 (in 1980 prices).

	1981	1987	1990
Corn	5,373	2,992	3,300
Beans	13,126	6,418	9,599

Table No. 6: Production of Corn and Beans 1981-1990

Cycle	Corn: Hectares Planted	Corn: Tons Produced	Beans: Hectares planted	Beans: Tons Produced
1981	436,187	580,715	223,572	85,194
1982	146,848	108,221	146,106	115,240
1983	313,941	274,208	152,679	56,973
1984	216,008	195,745	210,880	90,654
1985	326,457	267,271	140,249	60,879
1986	219,466	208,042	239,863	122,218
1987	335,761	256,882	177,219	57,167
1988	165,584	94,866	249,801	80,067
1989	147,210	61,950	97,635	19,289
1990	186,663	179,668	199,345	82,230

Elaborated by author using figures provided by the SARH delegation in the state of Chihuahua.

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Table No. 7: Comparisons of the average area harvested and the tons produced of corn and beans in the temporal lands, 1981-1985 and 1986 - 1990:

	1981-1985	1986-1990
Area harvested of corn	287,890 has.	214,830 has.
Area harvested of beans	174,697 has.	192,772 has.
Area harvested of both	462,587 has.	407,602
Corn production	285,232 tons	160,281 tons
Bean production	81,770 tons	72,194 tons
Production of both	367,002 tons	232,475 tons

(Figures provided by the SARH delegation in Chihuahua, 1991)

Table no. 8: Comparison of Average Annual Productivity in the production of corn and beans in the rain-fed areas of Chihuahua, for the years 1980-1985 and 1986-1990:

	1981-1985	1986-1990
Productivity in Corn	990 kgs./ha.	746 kgs./ha.
Productivity in Beans	468 kgs./ha.	374 kgs./ha.

(elaborated by the author with data from the SARH delegation in Chihuahua).

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Mr. PETERSON. Thank you very much for that fine testimony. We will have some questions after we hear from Father Pérez.

We will let the Father finish, and then if any other members have statements, we will take them at that time. Do you have to leave, Mr. Flake?

Father.

STATEMENT OF CAMILO DANIEL PÉREZ, PRIEST, CATHOLIC PARISH OF ANÁHUAC, CHIHUAHUA, MEXICO, ACCOMPANIED BY ANDRES THOMAS COTERIS, CONSECUTIVE TRANSLATOR, SIMPLY TRAVEL, WASHINGTON, DC

[Consecutive translation.]

Mr. COTERIS [for Father Pérez]. Good morning to all of you. We are genuinely very grateful for you listening to us, and we are also grateful to give testimony on the things which are occurring in our country. At this time, I want to be the voice of so many people, who undoubtedly want the best for all the peoples of the world.

I want to focus on two points regarding this free trade agreement. The first point regards the free trade agreement vis-a-vis the life and culture of our people. I want to advise you that we are conscious of the fact that the economies of our people need to be open, that accords in fact are reached, and conventions are needed and treaties and agreements between our various countries.

Undoubtedly, it is very important that we ask ourselves about the moral quality of these international agreements and about the consequences that these agreements can bring for the various peoples in their style of life, in their traditions and in their customs, in the just distribution of the goods of the land, and in the respect for human rights. I want to speak, then, about the life and culture vis-a-vis this free trade agreement.

In my parish as well as is experienced in regions throughout the country, frequently young people as well as adults go to work in other areas because the countryside does not give them enough to satisfy their needs. Many of these young people do not come back, but the ones that do find that their roots have been uprooted from their families, and their culture has been violated and their lifestyle.

A mother of a family which was very worried said, "My son no longer wants to eat beans because it ruins his English." This is very dramatic.

Salinas de Gortari started a program, rooted in the 27th amendment to the Constitution, and the purpose of this was to commercialize the land. In this way, then, many investors could come into the countryside. These reforms, at first look, could be very beneficial, but those of us who know the countryside, those of us who know about human relations in the countryside, those of us who know our history, we know that these measures of so-called "modernizing" in the countryside are going to be extremely painful and excruciating for our people.

This signifies that many people are going to have to leave their land in order to face an uncertain future. This means not only the loss of material goods, but also it signifies that they will lose a space of life, a sacred space for them, an integral center of their community life.

In our thinking and in our culture, with the peasant farmers and the indigenous people, land is a substantial part of the culture. It forms part of their historical project. When someone takes away the land of a farmer or an indigenous person, it takes away their life, it takes away their soul.

This is how the bishops of Guatemala expressed it in a pastoral letter in 1988. They referred to their own country, but undoubtedly we can use these words, and they have meaning for all people on our continent:

> The cry of the land is the strongest cry, the most dramatic cry, and the most desperate cry. It cries from millions of hearts among the Guatemalan people, who not only desire to have ownership of the land, but they want to be owned by the land. They are men and women of the corn, who profoundly identified with the rows of agriculture that they grow. They also find themselves kicked off their land. They are foresters in the land that used to belong to them, and they are considered second-class citizens.

This is what the bishops of Guatemala expressed.

A free trade agreement which does not take into account the profound roots, the cultural roots, the system of life of our people, undoubtedly this will violate our human rights. It is a lack of respect for our people. It puts at risk social peace and the well-being of our population.

I hope that I could express all of this with the heart and spirit of the indigenous people and the farmers. Someone asked me on one occasion, "Why do the farmers talk about the free trade agreement? Why do the indigenous talk about the free trade agreement? We are certain that they have no idea what it is about."

I responded to them:

> There are many ways of understanding this free trade agreement. Perhaps you and I know it with our minds. We may know with our intellect, but they know it very well but they know it through their empty stomachs, because Salinas de Gortari has already implemented some actions in order to pave the way for the free trade agreement. This has brought consequences already through the displacement of farmers, uprooting them from their land and the uncertainty of having no jobs. Last year, 1992, the year ended with 9 million unemployed. This becomes very dramatic and very serious for our people.

Moving to my second point, I also want to express how the free trade agreement is looked upon in the face of moral questions and justice. Undoubtedly, this agreement has, as part of it, free competition, and this puts into play the law of the fittest. We are already living this. There are many businesses, both small and middle sized, which have already gone out of business and, as a consequence, workers have been fired.

You, Congressman Sanders, know of my parish. You are aware that there are three large industries there, one makes cellulose, another makes paper, and another makes wood. The cellulose plant has just finished closing its doors because it cannot compete with the price of cellulose from the United States which enters freely into our country. This created 270 unemployed in my parish.

This is just a very little bit. For the Torremada mountain range, where thousands of indigenous people live, it means that 200 to 210 small communities, who work the wood, have been left without work. There are about 5,000 families. This is just a small example of what would occur if this situation continues and we do not look

with an integral world view at the problems which a free trade agreement could bring for the poorest and the neediest people.

It is very clear to us that the free trade agreement will bring a concentration of riches. Some public functionaries have, in justifying it, talked about making a larger pie in order to divide this pie later on among all. But this is a false comparison. Historically, this illustration has never worked. It is also immoral to talk in this way. It signifies what Montesquieu said: It is necessary for some to be wealthy, because if the wealthy do not spend, the poor die of hunger.

Also, this pie that we are talking about will be baked, undoubtedly, with the suffering of our people and with labor which is cheap and captive.

It is also true that something else occurs in the free trade agreement. This is the law of supply and demand. We ask ourselves if this law mechanistically will work in a positive way. They say that when supply goes up, prices go down. The problem is that many times, products are in abundance but there is a lack of those who can buy, because competition which is not real comes into play and therefore breaks many businesses.

Also, what is very difficult with this law of supply and demand is that the demand comes from those who in fact have money and not from those who have the need. They produce a lot so that those who already have a lot will have more, not for those who need more. This is why they abandon the countryside, and I want to reiterate that the countryside can sustain those who live there. The countryside can produce.

Unfortunately, the government has taken away the substantial subsidies. The financial source of the rural bank, in 1990, withdrew credit from 200,000 hectares out of the 300,000 that they were financing because the economic policies of the government are directed toward agro-industry. Consequently, it punishes those who produce corn and beans.

The emergent program of Procampo has the end of taking away the production of basic goods, such as corn and beans, in order to favor the production of cotton, which will be used for export. This free trade agreement, unfortunately we see it outside the context of the integral development of our people.

I would like to conclude my testimony by saying that undoubtably a free trade agreement that responds solely to capital interests and indiscriminate investment. It will cause many repeated violations of human rights and the life and culture of our people. It is indispensable, then, whatever trade occurs, that it form part of an integral of development which will guarantee the just distribution of resources and raise the standard of living and the self-determination of the people, respecting their cultural values and attending to their needs and their legitimate aspirations.

I also want to make reference to a document that has been produced by the bishops. Some of these bishops are proposing that all the bishops sign this document. These bishops say, among other things, the following.

They talk about the deterioration of life among our people that is obliging many families to be forcibly moved. Many come to the

United States. The consequence of this has been operation blockade by the authorities in the United States.

They affirm, among other things, the following. We have the grave responsibility to advise public authorities that it is indispensable that market economies should not be converted into something absolute to which everything should be sacrificed, accenting the inequality and the marginalization of the great majority. Because of this, we cannot be in accord with a free trade agreement which will not contribute to a human and just development. In this way, we think that the free trade agreement should be part of a more integral program for the social development of our people.

They also speak about operation blockade, and they call for a joint operation among the two countries to solve this problem.

Members of Congress and those who listen to this testimony, we are very grateful that you have given us the opportunity to testify. We would like to add many other things which occur with our people vis-a-vis the globalization of our economies. But we know that time is limited, and we do not want to tire you. There is a great suffering among our people that we wanted to present to you. I hope that our objective has been accomplished. Thank you very much.

[The prepared statement of Father Pérez follows:]

CONCERNS ABOUT THE NORTH AMERICAN FREE TRADE AGREEMENT

Statement of Fr. Camilo Daniel Pérez
Priest from the Catholic Parish of Anáhuac, Chihuahua

Before the Employment, Housing and Aviation Subcommittee
Government Operation Committee
US House of Representatives

October 28, 1993

INTRODUCTION

There is no doubt that currently the economies of the different countries are more dependent upon each other than ever before and for this reason agreements between nations, covenants and treaties are more necessary than ever. But in face of the globalization of the economy and the formation of large regional economic blocks, we have to always be concerned about the moral quality of international agreements, as well as with the consequences these agreements will have on the different peoples, their way of life, their traditions and their customs; on the just distribution of the resources of the land; and on the respect for human rights.

1. NAFTA BEFORE THE LIFE AND CULTURE OF OUR PEOPLE.

As we all know, NAFTA includes Mexican agriculture, by the way of bi-national accords between México and United States and between México and Canada.

As a response to the NAFTA negotiations, Sálinas de Gortari initiated the "modernization" of the agriculture. To make this possible, he reformed Article 27 of the Mexican Constitution to allow privatization of the collective farms (ejidos) and make possible the selling of the land, as well as to allow farms to be used by commercial or civic associations. In fact, the reform of Article 27 made it possible for private enterprises to invest in agriculture.

Maybe the reforms by Sálinas de Gortari appeared to be positive and beneficial for the farm producers, especially for poor producers who suffer an acute lack of capital to work their land.

However, all of us, who are closer and related to the farming communities and their internal relationship, believe –as we are beginning to see– that the "modernization" will be painful and will severely affect the farmers. Below we will explain the reasons for this assertation.

By providing property titles of the collective and communal farms to individual farmers, it will be easy, because of the undemocratic and crooked way of local governence and the lack of governmental support, to force the peasants to sell their lands and then join the army of unemployed or cheap labor, at the service of national and foreign businesses.

This means that the Mexican government is interested, as the peasants from my parish have expressed, in cleaning the land, but not of corrupt leaders, not of bad weeds or corruption, but of peasants and indigenous people who are not included in the "modernization" project of Sálinas, since this is a project of efficiency and which is one hundred per cent business orientated.

What kind of future awaits these people who will be forced off and displaced from the land? Are they going to the able to find jobs in a country in which in 1992 there were nine million unemployed people?

Unfortunately, for these people the only alternative will be to emigrate to United States with the corresponding results of family disintegration, loss of identity and, after all, to face a "blockade" on an every time more militarized border, making their situation more humiliating and dramatic.

What will be the consequences for peasants and indigenous people of their displacement or more exact, the theft of their land?

For all peasants and especially for the indigenous people, the land, more than an object of commerce, is a space for life, a sacred place, a center which integrates the life of the community. The land is an essential part of their culture and their own historic project. The land is sacred for them and, also, it is the main factor for their survival and their existence as a people.

The Bishops from Guatemala have expressed these ideas in their Pastoral Letter of 1988, which is directed to their own country, but which can be related to all peoples of the continent: "THE CLAIM OF THE LAND is, without doubt, the most powerful, most dramatic and more desperate call everybody hears in Guatemala. It is coming from the millions of Guatemalans who not only want to own the land, but who also want to be owned by the same land. People of the Corn are those who in one part feel deeply identified with the tilling, the growing and the harvesting, and on the other part, feel evicted from the land and stopped from becoming part of the fertile soil due to a unjust and sinful situation. They are foreigners in the land that once belonged to them for millions of years and they are now considered second class citizens in a Nation that was built by their ancestors."

Therefore, any commercial agreement which does not take into account the deep cultural roots and the human relationships and system of a community is a violation of human rights, is a lack of respect for the same people, and puts the

social peace and the well-being of the population, the critical elements of genuine healthy commercial opportunity, under great risk.

For all this, the priests and lay leaders in the Indigenous Pastoral of the Tarahumara Sierra of 1991, warned the public, the government and the Congress of the State of Chihuahua, that the reform to Article 27 of the Mexican Constitution "will open the door to new abuses", and "present clearly a threat which will bring us finally to the ethnic destruction, the killing of the culture and even the genocide, the massive death in the Tarahumara, Tepehuán and Warojío indigenous groups."

2. NAFTA BEFORE THE MORAL AND THE JUSTICE.

Referring concretely to NAFTA the way is presently designed, we feel that it is morally unacceptable for the following reasons:

1. This agreement is based on free competition, which means the "Law of the Stronger." Applied to the internal economy of our country, with the importation of foreign goods to our market, this will dismantle and leave defenseless a significant number of small and medium companies--small business which have been closing down and laying-off their employees. Also, and this is the more tragic aspect, this law of the stronger excludes the peasants and the poor farm producers from every kind of economic participation, leaving them with hunger they are now suffering which constitutes the most severe health problem in the whole country. The insufficient availability of food for the people of the rural communities does not leave them any other alternative but to emigrate.

2. Under the free competition, the concentration of wealth in a few hands (the big investors) is inevitable. It seems that this is being justified by the concept that the economic inequality is necessary because the expenditures of the rich will be the jobs of the poor. Montesquieu said: "The existence of luxuries is necessary. If the rich people don't spend their money, the poor will die of hunger."

This way of thinking is totally false and immoral. It is false because making a big cake does not mean that it will be shared. Historically this has never happened. It is immoral because it is accepted that the cake will be made with the cheap labor of a hungry people who lack social protections. The only ones protected are the ones who invest.

3. There is no doubt that NAFTA will put into play the law of supply and demand. We know that this law does not operate mechanically nor always in a positive way. It is said that when supply increases the prices are lower. However, frequently there is a surplus of products and lack of buyers and this, in conjunction with a illegal competition, results in the bankruptcy of many business, as happened recently with the company "Celulosa de Chihuahua."

However, the hard part of this law is that production serves to satisfy the

demand (of the one that have money, of course) and not the need (of the ones that have nothing). A lot is produced for the ones that have a lot, but not for the ones that have a greater need.

For this reason, México has abandoned farming. Those especially discouraged and punished with low prices are the producers of corn and beans. The emerging agricultural program "Pro-Campo" has the objective of discouraging the production of basics and promoting, for example, the production of cotton for exportation (via textiles). In this manner, agriculture will fall in line with the requirements of NAFTA.

4. Unfortunately, NAFTA is subscribed within a market economy with a completely economic vision, without safeguards for social protection and without establishing the means and appropriate mechanisms to protect and promote the development of the majority of the population.

Pope Paul VI and the Latinamerican Bishops in Puebla denounced this way of thinking of liberal type which "considers the making of profits as the vital engine for economic progress; the competition as the highest law of the economy; the private property of the means of production as an absolute right , without limitations or social obligations." (PP 26; DP 542)

Pope John Paul II, during his encounter with the indigenous people gathered in Yucatán, México, on October 11 1993, declared the following: "It is true that we can't deny the good results reached in some latinamerican countries due to the joint effort of the public and private interests. Such gains, however, should not be used as pretext to ignore the defects of an economic system whose main engine is the making of profits, under which the men are subordinated to capital, under which their work is reduced to a simple commodity at the mercy of the law of supply and demand."

CONCLUSION:

1. Without doubt, a Free Trade Agreement which only responds to the interests of capital and to loose investment, would cause many and more frequent violations to human rights, to the life and the culture of the people.

2. Therefore, it is necessary that any commercial exchange, which is every time more necessary to be made on the international level, be part of a complete project of development to guarantee the distribution of wealth, the improvement of the living conditions and the self-determination of people, respecting their cultural values and attending to their needs and legitimate aspirations.

I ask that the following statement, presented by the people in Anáhuac to the Government Operations Committee, be entered into the record.

Frente Democrático Campesino
Alternative Solutions for the Rural Area

1. The impact of the Free Trade Agreement on the rural area

We the rural producers, already know what the Free Trade Agreement's impact on the rural areas will be, since the Mexican government is now adjusting the economy as if the Agreement were already operating.

Certainly in the meeting that you just had in Ciudad Cuauhtemoc, you must have realized from the peasants themselves that almost all the countryside has been abandoned by the Government, without the necessary subsidies, or enough credits, with low prices for our output and with inputs such as fertilizers, fuel and financing very expensive, and with a good number of loans in the process of collection.

No doubt president Sálinas de Gortari intends to "clean" our lands of peasants in order to offer them to big investors from Mexico and abroad. This means that several million of us peasants will be displaced on our own land and since there aren't enough jobs, many will seek or many of us will seek to emigrate to the U.S. This is the reality of our rural area at the present time.

2. What does the rural area mean to us, the peasants?

We think that agriculture is profitable, but that it should not be seen as a business, but rather above all as a space of life for us, the peasants. Wanting "to clean" the land of peasants is something contemptible because it is a lack of respect for us, for our life, for our families and for the land itself, for us taking the land from us is taking life from us.

In addition, the countryside should be defended as a generator of employment, as a prop for the healing of the people and as a factor in well-being and social peace. Therefore, we reject the mercantilist vision that the FTA has of the rural areas and, in general, of the economy.

3. What can we, the peasants, do for the rural area?

We think that we peasants should unite and organize in order to make the agricultural land produce. Precisely here, in our region, a good number of us peasants have organized in the form of cooperatives. Thus for example, we have created a revolving fund to help ourselves with credits for production, we have

organized a savings and loan bank for the family economy. Occasionally we have organized ourselves to market the kidney bean. We also have a Consumers' Cooperative that has worked with very good results, as well also as a Housing Improvement Program supported by the international organization Habitat for Humanity.

There are some cooperative organization efforts, but certainly there is still a lot to do in this field, since we should organize much better in order to produce, to transform our products, adding value to them, and in order to make them sufficiently. All of this will create more jobs.

A great obstacle for organizing ourselves in this way is the lack of democracy on the *ejido* and, therefore, the small degree of participation that we producers have in the decision-making with respect to the country's agrarian policy.

In addition, we peasants feel that it is more and more necessary to join with other low-income farmers of the U.S. and Canada. That's why we have been pleased to form part of the Rural Coalition, which has its headquarters in Washington.

4. Toward organic agriculture

We also see the urgency of putting aside agrochemical agriculture and beginning to give importance to organic agriculture. Thus, in place of using chemical fertilizers we should use natural fertilizer, , we should protect our water from all contamination and reject all use of pesticides that damages our ecology and endangers our health.

Precisely now we have a great lagoon, Bustillos Lagoon, which unfortunately has been contaminated due to many factors: the sewage of several communities in the municipality is discharged there. The garbage deposited on the edges of the rivers and brooks is dragged there by the current. Pesticides reach here, many of which are prohibited in the U.S. and are used here with impunity. Until a short ago, the factories of the area were emptying their wastes there: cellulose, ponderosa and paper.

It is incredible that this lagoon, instead of being a blessing for the immense amount of water it stores, is for us a headache because of its contamination and the floods that it has caused us.

Therefore it is very important for us to propose to seek the most feasible way to bring back the water for agricultural use, whether by retaining it before it reaches the lagoon, or by implementing ways of using water, rehabilitating it at least for certain crops. There are some studies and projects carried out by the committee for the Solution of Bustillos Lagoon that we must take and follow up.

5. What should the government do for the rural area?

In the first place, the Government should reactivate the domestic market and turn its attention toward the rural area in order to provide it with the necessary support, since agriculture is the basis of social well being and healthful human co-existence, things that Sálinas de Gortari seems to have forgotten.

As soon as possible the government should :

1. Resolutely support and facilitate the organization of peasants, so that the economic organizations for the rural areas directly handle the Government supports, becoming responsible for their utilization, thus avoiding all bureaucracy and corruption. Also the Government should facilitate the creation of credit unions and savings and loans banks, as well as the creation of revolving funds per organization etc.

2. Solve as soon as possible the problem of the loans being collected and enable the rural area with soft sufficient and timely loans.

3. Implement a program of substantial subsidies to the factors and inputs that we use in the countryside, so that the high prices of fertilizers, fuel and agricultural financing will come down.

4. Provide sufficient and fair price guarantees and strict control over the importations of agricultural products so that our economy does not suffer.

6. Our position on the Free Trade Agreement

We agree and, it is also a necessity, that our economy must open to the world, so that international treaties must be signed.

But we do not agree with this Free Trade Agreement concretely because it is an agreement that attacks our dignity as peasants and rural producers, as it views us as a "useless" piece in the economy as a whole. The agreement considers us only as a mere business.

Nor do we agree with the agreement because it is clear that it is only made for the big investors. This will cause the number of poor in our country to increase and the abyss between the rich and the richer and the poor and the poorer will grow.

So, we reject this agreement because it does not include the mechanisms of an efficient social well being, a real growth in jobs that will only be generated according to the judgment of the investors, who will;; seek cheap and captive labor. Nor will the agreement foster the production of basics grains or include the development of indigenous peoples and besides, it is risky for our sovereignty.

We reject this agreement because we are sure that a treaty that does not look out for the social well being of the population or therefore raise the standard of living of Mexicans will not be able to bring about a more efficient, more competitive and open economy. An agreement that does not serve the people carries the trace of its own failure.

We will have to say with sadness that we reject this agreement because it was made behind the backs of the working class, in which we include ourselves, the peasants.

Finally we feel that for Sálinas de Gortari the approval of the agreement is necessary for political motives. For him and his group, the agreement is his favorite child and his first-born. With the agreement approved the Sálinas group will be consolidated in power. This is currently Sálinas' interest and not the interest and not the interest of benefiting the people.

Sincerely,

UPCALA (Union for the progress of the Peasants of Bustillos Lagoon) affiliate of FDC. Anáhuac, Chihuahua
October 10 1993

COMMUNICATION OF MEXICAN BISHOPS on NAFTA

We, the undersigned Bishops, want to make all men of good will aware of our pastoral concern about the growing deterioration in living standards that the people in general are suffering because of low wages, because of the increase in unemployment due to bankruptcy of many businesses, because of the scarcity and high prices for basics, etc.

Without doubt, one of our major concerns are the peasants and indigenous peoples, who are being hit the worst because of the economic recession, facing increasing levels of malnutrition and the impossibility of planting without credit and substantial subsidies. Middle-sized farms are also confronted with debt problems and loss of capital.

All of this has forced many families to be displaced, to head to the urban centers, and to the US border with the hope that they can cross. This has resulted in "Operation Blockade" on the part of the US authorities.

We must ask ourselves, from our evangelistic mission and with the heart of pastors, why must our people have to endure this situation?

Certainly, in good measure our country is being affected by this worldwide economic crisis. But, most assuredly, we can affirm that the economic policies of the government, which have been defined to favor NAFTA, forced, among other things, the opening of the market, restriction on public spending, a strict fiscal and monetary control policy, privatization, restraint of inflation, etc. All of this has brought, as a consequence, a high social cost that harms the least protected sector of our society.

In our service as pastors, we must question this serious deterioration in the standard of living of the poor, and we are compelled to say our words, by the light of the evangelic faith:

1. We affirm that, like the Church we are, we profoundly respect the legitimate autonomy of the worldly order and in no way is our purpose to give technical directions, especially for a commercial treaty.

2. But we have the serious responsibility to warn the public authorities, just as the bishops did in Santo Domingo in October of 1992, that it is essential that "the market economy does not become something absolute to which everything is sacrificed, accentuating the inequality and the marginalization of a large portion of the population." SD 195, John Paul II, Declaration of Santo Domingo 195 (1992)

Our concern is heightened by the economic indicators already before us. The putting in place certain measures by the government in anticipation of NAFTA has augmented the breach between rich and poor: the rich Mexicans have become richer, while the poor are made poorer.

For this reason, we cannot agree with a NAFTA that does not contribute to a humane and just development for the countries involved and for their neighbors. We think that a NAFTA must be a project with a more comprehensive plan of integration and social development for the people, taking into account more of the social sector of the economy and not just the large financial corporations. Without this, the prevailing view in the treaty is just speculative.

3. We profoundly mourn the displacement of so many families from their land for an uncertain future, and we mourn still more because, as the Pope said, "We are the keeper of the land" (John Paul II, Latacunga, Brazil, 1985) and should always be in close contact with it. Our culture is bonded to dignified use of the land.

We should not repeat one more time the biblical story of how powerful King Ahab displaced from his land a poor peasant named Nabot (I Kings, 21, 1-29.)

4. We cannot but denounce the so-called "Operation Blockade" that is taking place on the US border to deter emigration. It is humiliating to our people and brings out racist sentiments and violence.

We believe that this is not the solution to the problems relating to migration, but rather, we need action together and in concert between the two nations to attack the causes that have triggered this social phenomenon. God grant that they take into account the thoughtful proposals that some Episcopalian brothers have made on this.

5. We also want to encourage all those organizations, (SD 177) such as the cooperatives, that are in favor of economic solidarity with "those of our people who are trying to respond to the anguished situation of those living in poverty." (SD 181) The Pope has insisted on the necessity of "looking for solutions at the world level, to create a true economy of sharing and participation, as much international order as national." (SD 206)

6. We, as pastors of the Catholic Church, recognize the effort of other churches and Christian denominations of our continent to cause human and Christian values to prevail in the rise of large economic blocks that are being negotiated. We think that at the present time, we have a great ecumenical task that we must raise to the level of cooperation, together with the promotion of common values, to bring to reality programs to help the least favored in our countries.

Finally, we pray to God for the intercession of our Mother and the Lady of Guadalupe in the difficulties facing our people. We pray that the saintliest Mary will help us build a Mexico that is more just, brotherly and with a sense of solidarity, under the guidance of Christ Jesus, the Good Shepherd.

October 25, 1993

ARTURO LONA REYES, Bishop of Teltuantepec, Oaxaca
BARTOLOME CARRASCO BRISENO, Archbishop Emeritus of Oaxaca
SAMUEL RUIZ GARCIA, Bishop of San Cristobal de las Casas, Chiapas
ADALBERTO ALMEIDA Y MERINO, Archbishop Emeritus of Chihuahua
HERMENEGILDO RAMIREZ SANCHEZ, Bishop of Huautla de Jimenez, Oaxaca

Mr. PETERSON. Thank you, Father and Mr. Quintana. We appreciate your traveling all this way to be with us.

I want to say that it is somewhat instructive that the farmers in Canada are more opposed to NAFTA than the farmers in my district, which is hard to believe. I was very surprised to go to Mexico and find out that, almost universally, the farmers in Mexico are opposed. It is instructive that a majority of what I would call family farmers in all three countries think that this agreement adds to their problems. It is not the total problem, but they do not think it solves anything. It actually moves it in the other direction.

I also would like to say that when I was in the square in Chihuahua, I want to thank Carlos Marantes, who got up early and took me out to see the countryside. I will testify that the pinto beans which I used to raise on our farm in Minnesota, the yields were better in Chihuahua than we ever got. So the crops look very good out there.

I came back into town early that morning and met with the farmers there in the square. I was somewhat surprised—I guess I had not really thought about it. My judgment was that you had farmers from every aspect. It seemed like you had some of the smaller farmers and some of the larger farmers, and they all seemed to be united in opposition, not only to NAFTA but some of these other policies of the government. Is that a fair characterization?

Mr. Quintana, in our country, the Farm Bureau does not always agree with the Farmers Union. I do not know what you call them in your country. My feeling was that all of the different groups were represented there, and they all seemed to be united in their opposition.

Mr. QUINTANA. Yes. In fact, I think it is part of the current struggle of the agricultural producers. When we were stretching out our arms at the international bridge, on one hand we had a small producer, and he came with two or three cows. On the other hand, we had a formerly wealthy person who used to have 1,000 cows but now only has 1,000 documents from the bank.

I think it is very interesting now that we are currently producing a convergence which has never occurred in Chihuahua, Mexico, except for the Revolution of 1910. All of the rural sector—the rich, the middle income, and the poor—are against the financial oligarchies, the Federal policies, and the transnational companies.

Mr. PETERSON. I would also like to say that on that day in the square, I saw the Chihuahua paper we got that day with a picture of the tractor they were burning in Juárez. I had to leave early, but in deference to the folks that were there, you did not burn a tractor on Sunday. You were more circumspect, I guess. It did surprise me, the level of opposition and how united it seems all across Mexico.

Before I get into any other questions, I would like to recognize Mrs. Thurman.

Mrs. THURMAN. Mr. Chairman, I do not have anything.

Mr. PETERSON. You have four committees this morning, too?

Mrs. THURMAN. I have had four committees this morning. The only thing I can say is, they are very courageous to be here. I think their message is heartfelt.

Mr. PETERSON. The gentleman from Vermont, welcome to the committee.

Mr. SANDERS [in Spanish]. My Spanish is very poor. Many thanks to my friends from Chihuahua for your hospitality.

[In English]. Mr. Chairman, I was, ironically, late for the meeting today because I was on the floor of the House, talking about legislation that I have introduced which would save the family farmers of America, who are also being pushed off the land. I only wish I had your eloquence in making the case that you have made here today.

As I am sure you understand, the United States, like Mexico, is controlled by very wealthy and powerful people, who make decisions that basically work for the interests of the rich and the powerful against the interest of the vast majority of the people.

I was very touched by your beautiful testimony, which understands that life itself cannot be based on the holy dollar and that it is terribly important that human beings who have worked the land with dignity, for years and years, not be thrown off the land because corn can be produced in this country for less money than it is in Mexico. Ultimately, the people who benefit are going to be the wealthy people in both countries.

The point you also made that the displacement of so many small farmers in Mexico will be devastating not only to them but to the United States as well. When they are pushed off the land, they are going to head north.

I want to tell you, as deeply as I can, that I am so impressed by the work that you have done in Mexico. It was a great honor and privilege for me to visit with you and your parishioners. I promise you that I and others here will do our best to defeat this agreement and work for an agreement which in fact will benefit the poor of Mexico and the poor of the United States, rather than just the wealthy of both countries.

You have given us a tremendous amount of courage, and I thank you so much.

Mr. PETERSON. Thank you, Mr. Sanders.

Mr. Quintana, you mentioned in your testimony that all over Mexico, the experts are talking about the displacement of 3 million farmers and a total of 15 million people from the rural areas. Is it generally agreed in Mexico that this will occur?

Mr. QUINTANA. Everyone does in fact say that there will be displacement. There are some differences in the figures. There are more researchers who have said that there will be a loss of 3 million jobs. We find that there are three to four people who are dependent upon each job. So this loss of 3 million jobs will affect about 12 million people.

Some say that only 2 million jobs are at risk. No one says that it is below 1.2 million. In any case, it is the loss of many jobs.

The industrial parks have benefited a great deal from the regime of the free market since 1965 and from financial stimulus. This only has created 540,000 jobs in all these years.

Mr. PETERSON. The Procampo program, the farmers who are going to get so much per hectare for giving up their subsidies, they can grow whatever crops they want at the world market price? Is that the way this is going to work?

Mr. COTERIS [for Father Pérez]. What is happening with the Procampo program, which has not been implemented completely, is this. Last year, beans were worth 210,000 Mexican pesos. Now, they are worth from 160,000 to 180,000. The price has lowered. The result is that the prices will now match internationally the prices of corn and beans. In order to achieve this, there is a stimulus that is offered to the farmers for the next seed planting, but the stimulus is a quantity determined per hectare.

The consequence of this is that those who produce the most corn or beans will receive less and less stimulus. In such a way, they will not be encouraged to produce these basic foodstuffs. On the other hand, other products that will be used for export, such as cotton, will in fact be stimulated a great deal. This will help "fido sanitary."

Mr. COTERIS. I am sorry, I do not know what that is.

Mr. COTERIS [for Father Pérez]. The consequence of this will affect the basic foodstuffs which are fundamental to our people. These foodstuffs will disappear, and we will have to find them from other parts. This, undoubtedly, will affect the economic and political sovereignty of our people and, above all, their lifestyle.

Mr. QUINTANA. I would just add a little bit to what my friend said. The first payment of Procampo will be made some days before the Presidential elections in Mexico. That is just a fact to share with you.

Mr. PETERSON. From what I could see, in this little village I went to where the farmers were living, they probably are not going to be able to make a living just from farming if this is implemented. In America, they say we have 1.5 million farmers, but over 1 million of them have 90 percent of their income from off the farm. That is evidently where you are heading in Mexico.

My question is, these people living out in that little village, where are they going to get the jobs to supplement what they are losing? How are they going to get into town? We saw people who were hitchhiking. Carlos and I gave a ride to some people that day. I just do not understand how this is going to work. Even if it is 1.2 million people or 3 million or whatever it is, the maquiladoras only created 540,000 jobs. How do people think this is going to work out?

Mr. QUINTANA. I think you have precisely pointed to the problem we have. No treaty, no agreement in the terms that we are actually dealing with, no policy of structural adjustment which the Mexican Government has in fact implemented can create the needed jobs.

Our country must take different options. It is better and cheaper to struggle for the jobs that are currently in the countryside, to conserve them, than to create new jobs and new public services and new infrastructure in the cities. We have a great problem of violence in our cities. We have a great problem of the loss of identity, of the breaking of solidarity. This cannot present itself if we in fact invest so that the people who live in the countryside stay there. This implies an option for society which is very different than currently exists.

Mr. PETERSON. Do the other members have questions? The gentlelady from Florida.

Mrs. THURMAN. Did you have a question?

Mr. ZELIFF. I yield to the other side. I am used to that.

Mrs. THURMAN. This is to both of you. Last week, here in Washington, we had an anti-NAFTA rally from the Florida farmers. Their opposition is based on what they are also hearing from the NAFTA agreement.

One of the issues that the chairman brought up was based on the subsidies issues. We have understood that there will be subsidies to keep you in some production but only so that eventually you will be able to go into what they think will be more economically feasible, such as citrus and fruits and vegetables. Is that happening? Have you heard that?

Mr. QUINTANA. First of all, the subsidies in Mexico are extremely reduced when compared to subsidies in the United States or in Canada. I have some data here which we can show you now. In general, the subsidies which come to the small farmers are not subsidies that are given to foment productivity or the conversion to other crops. These are subsidies that are granted to small farmers so that they do not cause trouble. It is better to give a little bit of money to the farmers to prevent them from going to the international bridge to protest.

The data are, as follows: In the United States, according to the University of Chapingo, the average subsidy per farmer is $36,000 per year. In the European Economic Community, they receive a $17,000 subsidy. In Mexico, $1,000. With $1,000, you cannot really think about a corn producer beginning to produce fruits. With $1,000 per year, you can only think about not starving to death.

Father PÉREZ. I would like to add one other thing, in order to understand the situation. How does the government look upon small and medium-sized producers? The government looks upon each small producer community as a political production center and not an economic production center. The Pronasol program, for example, and the Procampo program are ways of political control for these producers. For the government, each peasant farm worker equals one vote.

Mrs. THURMAN. Thank you.

Mr. PETERSON. Mr. Zeliff, do you have a question?

Mr. ZELIFF. Thank you, Mr. Chairman.

First of all, we welcome you here today. You are a long way from home. We enjoyed your hospitality in Chihuahua. We saw, in the square in Chihuahua, the tractors and the farmers in their demonstration and your comments on the confiscation of goods. In New Hampshire, we, too, have had many problems recently. Five out of seven of our major banks went down, the FDIC took over $2.3 billion of properties, businesses, and homes. We had foreclosures and bankruptcies. So we sympathize with what you are going through.

How would you describe your productivity rates on your farms, versus our country and other countries?

Mr. QUINTANA. First of all, we have to ask ourselves, what does productivity signify? An agricultural worker from Mexico, a peasant farmer, produces at most in the center of the country 2 tons of corn per hectare. In the United States, it is 7 tons per hectare. In this sense, then, we are not productive.

But in the worst lands that we have, without the machinery or with junk machinery from the United States, without certified

seeds, and without any credits or with credit that is politically conditioned, with little rain, even in this way, the Mexican farmers produce 70 percent of all the corn that Mexico needs. And they conserve their jobs and their culture. For me, this is included in the concept of productivity.

It is true that we have to improve the agricultural techniques in many aspects.

Mr. ZELIFF. When did you feel the economic hardship on your farms? Was it before Salinas, after Salinas, or long before Salinas? Is it just happening as a result of NAFTA?

Mr. QUINTANA. The economic situation of our peasant farmers was already bad, beginning in 1940 when the burden of industrialization fell upon the agricultural sector, which was producing the raw materials and the foodstuffs cheaply for industry. Nevertheless, this production increased spectacularly, life conditions improved a little bit, and they were able to establish guaranteed prices and to take some services to the countryside.

The last year in which the peasant farmers could buy new tractors was 1981. In 1982, the agricultural crisis and the food crisis began. It is tied not only to NAFTA, as we must recognize, but above all they are tied to the policies of structural adjustment. From 1982, Mexican agriculture has been in the worst crisis of its history.

This has affected the life conditions of our Mexican people, and it cannot be separated from the structural adjustment measures in the economy at large. What President Salinas is doing is to deepen these measures, to broaden them, and to crown them with the NAFTA proposal.

Mr. ZELIFF. So if the NAFTA proposal is defeated, your problems are solved, or will you continue to have the same problems you have now?

Father PÉREZ. Before responding to that question, I want to underline something about productivity. It is very important that productivity not be seen in an isolated way, isolated from an industry or a concrete product. We also have to look at productivity in the broader social context. This is why we look on productivity as the people having services, a condition of well-being, and sufficient social peace so that they can develop themselves in their culture, their lifestyle, and their customs.

Going to your particular question, rejecting NAFTA perhaps would not solve our problems, but if we have strong participation among the citizenry, we will force the government to have them turn their face and pay attention to the farmers, begin to strengthen the internal markets, give those economic supports and necessary subsidies and credits that are opportune and would help make life in the countryside more productive.

In the countryside, land is cultivated with two elements: The peasant farmers and the government. But the government has already become tired.

Mr. QUINTANA. I want to add something. First of all, I want to thank the interest and the honesty of Representative Zeliff. I am aware of your opinion about NAFTA. Nevertheless, you have shown a very strong interest in having a dialog with us.

I want to say that we are not inviting a simple rejection of NAFTA. We are inviting you, members of Congress, to look at a better agreement. We are interested in an agreement, but we can improve this one.

Mr. ZELIFF. Thank you. I would make one quick comment. In Chihuahua, on Sunday night, I went out and took pictures of displays. I went to grocery stores. I talked to produce people, vegetable people, and asked them where they got their products, what was imported, and what was grown there. I talked about your climatic conditions. I really tried to understand the problem that you are going through, and I sympathize.

I really believe that as a Third World country, you are going to develop and improve your standard of living, and you are going to be going through the same challenges that we did in our country and maybe still are going through. Some small farms will be lost, and people will have to move off the farms to take other jobs. My sincere belief is that NAFTA will create job opportunities. We obviously have an honest disagreement.

I thank you for appearing here. I have enjoyed your country, being in Chihuahua with you, and having you appear here today.

Mr. PETERSON. I, too, would like to thank both our witnesses for taking the time to come with us and also for your hospitality when we were in your country. There are many questions we could continue to ask, but we are running out of time here. We appreciate very much your being with us, and we look forward to coming and visiting you again, and your coming to visit us again.

Father PÉREZ. We will receive you there with a great deal of hospitality and gratitude, all of you.

Mr. SANDERS. Mr. Chairman, could I enter this statement into the record, please?

Mr. PETERSON. This is your statement?

Mr. SANDERS. Yes.

Mr. PETERSON. Without objection. Also, as I understand it, Mr. Quintana has a report on Chihuahua agriculture that we will make part of the record. Mrs. Thurman had asked if there was any document that would explain the subsidy structure of Mexican agriculture and also the Procampo structure. If there is anything written down, if you could, make that available to us so that we can better understand how this works.

Mr. QUINTANA. I can make a copy for you.

Mr. PETERSON. We will also make that a part of the record and distribute it to the members. Again, thank you very much.

[The prepared statement of Mr. Sanders follows:]

TESTIMONY OF REP. BERNARD SANDERS
BEFORE THE COMMITTEE ON GOVERNMENT OPERATIONS
SUBCOMMITTEE ON EMPLOYMENT, HOUSING, AND AVIATION

OCTOBER 28, 1993

Thank you, Mr. Chairman. Let me begin by thanking you for holding this timely hearing. The current privatization of communal Mexican farmland and its effects on Mexican emigration to the United States has not been given the attention it deserves. With Congress expected to vote on the North American Free Trade Agreement within the next few weeks, it is important that we examine this treaty from as many angles as possible.

Mr. Chairman, you and I and other members of the Committee on Government Operations recently travelled to Mexico, where we spoke with Mexican farmers in Chihuahua. We heard first-hand of the recent changes in Mexican agricultural policy and their effects on Mexican farmers. As you know, the most significant of these involved changes in Article 27 of the Mexican constitution, allowing for the first time the division and sale of the communally-held Mexican farms known as "*ejidos*".

This privatization of communally-held Mexican farmland is but part of the current Mexican policy of agricultural modernization. This modernization also includes a reduction in the availability of credit to small Mexican farmers, the credit needed to purchase seeds and fertilizer and fuel and to make purchases of equipment such as tractors. Some of the witnesses appearing before you today will provide you with further

information on the difficulties facing small Mexican farmers because of the agricultural modernization.

I am very pleased that Victor Quintana ~~and Rafael Corral~~, one ~~two~~ of the Mexican farmers appearing here today, will be joining me this Saturday at a town meeting in Montpelier, Vermont. Although many Vermonters are aware of the effects the passage of the NAFTA would have on their jobs and on their farms, this will be the first opportunity for many to hear that Mexican farmers face similar hardships.

In fact, Mr. Chairman, there are on-going protests in Mexico right now, demonstrating the opposition of many Mexican farmers to their government's reliance on the NAFTA as the cure-all for the myriad of economic problems facing that country. One of these protests is a march from Oaxaca to Mexico City, drawing attention to the rural crisis which is throwing thousands of indebted farmers off their land.

Mr. Chairman, I am very concerned that the NAFTA would exacerbate the displacement of Mexican farmers caused by the Mexican agricultural modernization. This modernization, which was undertaken in anticipation of the NAFTA, is concentrating land ownership and wealth in the hands of the financial and political elites of Mexico, threatening a return to the days of pre-Revolution Mexico when 1% of the people owned 70% of the arable land.

There are presently [redacted] millions of farmers in Mexico. It is estimated that three million of these farmers, and their families, could be forced off the land if the NAFTA is adopted. The NAFTA would facilitate the entry of large agribusinesses and corporate farming into Mexican agriculture while simultaneously reducing Mexican tariffs on corn and beans and dairy products, flooding the Mexican market and forcing out small Mexican farmers.

Although the Mexican economy is growing at an impressive rate, it is not growing fast enough to absorb all those entering the job market for the first time, let alone those displaced from their farms. Mr. Chairman, even the most enthusiastic proponents of the NAFTA could not predict that, under the NAFTA, the Mexican job market would expand fast enough to absorb the nine million Mexicans currently unemployed, to say nothing of the millions of farmers and farmworkers who would be displaced by the adoption of the NAFTA.

Mr. Chairman, like the hundreds of thousands of farmers and their families who lost their farms here in the US in the 1980's, and who continue to lose their farms today, the displaced Mexican farmers and their families will need to find a new source of income. Where will they go?

Mr. Chairman, they will come north, to the United States. Three million farmers and their families represents fifteen

million people, looking for food and shelter here because they have lost their traditional livelihood. Mr. Chairman, you are well aware of the current controversy that surrounds the immigration issue. This will be intensified by the Mexican agricultural modernization, and especially by the passage of the NAFTA.

Mr. Chairman, we should encourage the Mexican government to provide access to credit for small Mexican farmers. We should be encouraging democracy in Mexico by promoting community development foundations, to support the economy on the local level, rather than supporting a NAFTA that would foster the concentration of land in the hands of a few large corporations.

Mr. Chairman, the NAFTA could create even more unemployment in Mexico than it would in the United States.

Thank you.

AGRICULTURE, NAFTA AND SUSTAINABLE DEVELOPMENT: The Case of Mexico

Luis Hernández Navarro

In this presentation, I will try to explain very briefly four main issues: the current state of Mexican agriculture, the logic of the people who are promoting NAFTA in Mexico, the impact of NAFTA on agriculture in general and specifically on small producers, and the future for campesino agriculture and rural society.

Throughout the presentaton I will stress the ways in which NAFTA, from the government's perspective, forms part of a set of broader reforms that seek to change the old model of development based on import substitution for a new model based on the policies of structural adjustment and stabilization. In this context, NAFTA is not the central element of the reform strategy but rather seals the package in place. In accordance with this new model, an important current within the government believes that agriculture plays a secondary role in the economy and that the most efficient strategy is to concentrate efforts exclusively on the export sector. This means sacrificing both campesino production and goals of sustainable development, and continuing to bleed the vast majority of rural communities.

Mexican Agriculture

In contrast to the United States and Canada, Mexico's agricultural natural resources are extremely limited. The country does not have broad farmlands nor much quality soil. Sixty-three percent of its surface area is arid, 31% is semi-arid and only 6% is composed of wetlands or semi-wetlands. Nearly one-third of the land under cultivation can only produce under irrigation. Of land used for seasonal production (17 million hectares), only 20% offers conditions appropriate for agricultural activities. More than 60% of the surface area in agricultural production is worked under extemely precarious conditions. A significant part of these crops are grown on hillsides and steep inclinations.

These geographical characteristics make it very difficult to successfully adapt productive technology developed for other eco-sytems in Mexico. Also, the high risk of natural disasters discourages investment in expensive inputs.

Government policies have contributed to the current dilema. During most of two decades, the low prices of agricultural products subsidized the process of industrialization in the cities.

The final result of all these factors is that, in general, Mexican agricultural production is characterized by low levels of productvity, a lack of infrastructure and the decapitalization of the sector.

On this shaky material base, a highly polarized agricultural model has been built. On the one hand, a small number of rural businessmen own the vast majority of high quality land, water and inputs and produce for the market, many for the export market. On the othr hand are the huge number of small family farmers who produce for family consumption; these work the worst lands and lack access to water and inputs.

Some statistics paint the harsh reality for small farmers:

a) The average extension of land worked is 10 hectares, or 22 acres.

-Only 8% of farmers have plots of more than 10 hectares.

-31% have plots between 4 and 10 hectares.

-61% have plots of less than 4 hectares (8.8 acres)

b) Three-quarters of all agricultural producers cultivate land that sustains only seasonal production.

-14% have some sort of irrigation system

-12% have both land for seasonal production and irrigated land

c) Between 1985 and 1990, 63% of ejido producers were unable to obtain credit from any source.

-Only 8.3% had long-term credits

d) Only 56% of producers have access to farm machinery. Of these, 66% rent the machinery.

e) Four of five producers in the social sector cultivate corn, with yields of less than one-half the national average, which is 1.7 tons per hectare.

f) During the decade of the eighties, 48% of the rural population earned incomes of less than the minimum wage.

-10% earned incomes between one and one and a half minimum wages

-34% earned incomes over five minimum wages

The statistics are important because they demonstrate the handicaps of Mexican small producers entering into a free trade agreement.

Mexican agriculture faces a range of structural problems that can be summarized in six basic points:

1) Expansion of agricultural and livestock production in areas unsuited to these activities.

2) Low levels of productivity and efficiency

3) Serious technological deficiencies

4) Atomization and polarization of resources and producers

5) Decapitalization, indebtedness and insufficient infrastructure that reduces the capacity to attract investment

6) Continued inequality in the terms of trade between the countryside and the cities

This situation has resulted in a severe crisis that manifests itself in the following:

a) Rural standards of living have steadily deteriorated; the average rural income is currently 30% below the urban level.

b) Producers' salaries have fallen drastically in the last thirteen years.
c) Employment opportunities both in agricultural activities and in other rural activities have been reduced significantly.
d) The massive importation of foods has led to a serious imbalance in the balance of agricultural payments.
e) The deterioration of natural resources has progressed to an alarming degree.

The Logic of Government Policies

Since 1982 the Mexican government has applied a development model based on structural adjustment and stabilization policies oriented to the exportation of manufactured goods. This model is based on the privatization of state-owned enterprises, government deregulation and an open economy.

Of all economic sectors agriculture was the most affected by these policies. Government resources to the sector declined sharply; guaranteed prices were eliminated for eight of ten products formerly supported by this mechanism and the prices were adjusted to international market prices; many state-owned enterprises that regulated demand for certain farm products or distributed basic inputs were privatized; and finally the borders were indiscriminately opened through the unilteral elimination of duties and import permits.

The explicit objectives of these policies were to modernize the sector by plunging it into a market economy -- a "sink or swim" strategy -- and to maintain low farm prices to control inflation.

The effects on agriculture were devastating: a drastic decline in food production and increase in food imports, widespread bankruptcies, a sharp increase in rural poverty and out-migration from the countryside.

According to the governmental logic, NAFTA is the main instrument to consolidate this set of reforms. The goals are to attract the foreign capital required by the new model (approximately 20 billion dollars a year), assure untrammelled access to the U.S. market and establish dispute resolution mechanisms.

In the context of Mexico's current development model, it is considered a burden to sustain an agricultural sector that absorbs nearly 28% of the economically active population but produces only 7% of the gross domestic product. An influential current of thought within the present administration argues that this burden should be lifted through surgery: reduce the rural population to no more than 10% of the economically active population. The state's scalpels are government agricultural policies (basically price and subsidy policies that dictate who stays and who goes) and the trade liberalization codified in the free trade agreement. Here one aspect is especially key: the liberalization of corn markets.

Agriculture and NAFTA

NAFTA is a commercial agreement that accelerates economic integration between unequal and asymetric economies and does not create institutional nor financial mechanisms to attend to affected sectors. The agricultural sector concentrates the worst inequalities.

Particularly in the production of basic grains, Mexican agriculture suffers from inequalities in the distribution of natural resources, in levels of infrastructure and technology, and in the distribution of resources to promote agricultural development.

Mexico's major comparative advantage over its northern partners is found in tropical agriculture. This advantage fades however, when seen in the light of three basic facts: the limited scientific and technological research in the region, an international crisis in the prices for the major products from these ecosystems (coffee, cocoa, tropical fruits), and the similar comparative advantages that other countries have to access U.S. and Canadian markets with the same products (Colombia and Brazil, for example). In addition, the United States already receives 90% of exports of the principal Mexican tropical export product -- coffee.

Since the potential for growth in this area is limited, the only three sub-sectors that may be winners in the free trade agreement are large beef exporters, producers of certain seasonal friuts and vegetables and some sugar cane producers joined, if they're lucky, by some citric producers.

The losers, on the other hand are many, but above all the small corn producers. Corn is the country's main crop. Its portion of total agricultural production, in terms of value, represented 20% in the last three years. Corn is grown in nearly 48% of the cultivated land area. The national average yield is 1.7 tons per hectare, compared to 7.5 tons per hectare in the United States. Of the almost two and a half million producers of corn in the spring-summer cycle, nearly 90% planted extensions of five or fewer hectares and a little over half grow for family consumption. Almost 40% have plots of one hectare or less. Corn is the heart of campesino production. Liberalization of corn markets associated with NAFTA and the elimination of government-guaranteed prices (almost double the price on the internatonal market) will mean an end to food self-sufficiency in Mexico, or what's left of it; the ruin of hundreds of thousands of producers; and the more or less massive emigration of many of these to the United States as illegal workers -- all this, even taking into account the fifteen-year transition period established by the agreement. Several researchers have calculated that nearly 850 thousand households will leave the countryside, 600 thousand ofwhich will go to the United States in search of employment. The official announcement to establish a direct subsidy to the producer could alleviate the effects of this liberalization.

However, to the extent that this subsidy is the result of an executive order and not the result of a formal regulation or pact with campesino organizations or the legislature, it will wind up being the mechanism for expelling producers from the countryside.

This model also implies eliminating CONASUPO -- the government commodities supply and distribution agency -- as a regulator of the corn market, to be replaced by large agroindustrial companies. This will result in the abandonment of any program to regulate supply.

Two more aspects should be emphasized among the effects of NAFTA in agriculture.

The first refers to intellectual property rights over the biogenetic diversity present in Mexico. Permitting intellectual property protection over life forms or biological materials will led to the increasing dependency of communities on transnationals. Technologies and productive information that for centuries has been the heritage of humanity will become the private property of individuals.

The second refers to a gap in the negotiation of the NAFTA. In spite of the fact that the agreement establishes the free transit of capital and goods, it does not mention the free passage of Mexico's major export: the labor force. Thousands of day laborers will cross the border any way they can to find work in the U.S. without the most basic labor protections.

Sustainable Agriculture, Rural Communities and NAFTA

The new model of development that the Salinas administration is promoting for Mexico has several specific objectives for agriculture: to drain off the "extra" rural population; to concentrate landholdings in order to create an industrialized "modern" model of agriculture based on mechanization, the use of improved seed and agro-chemicals to boost productivity; to promote joint ventures that are a disguised form of renting ejido land; and to convert agricultural lands to livestock production. NAFTA reenforces all these tendencies -- to the serious detriment of small farmers -- not only because it obliges national producers to compete against better-equipped systems of production, but also because it has been explicitly designed to halt initiatives toward alternative rural development models.

From this perspective, the future of rural communities and of the development of a sustainable agricultural development model is in grave danger. Ironically, NAFTA furthers an agricultural model almost bereft of agricultural producers in a nation of campesinos and without immediate possibilities of expanded urban employment. It favors buying foodstuffs abroad over promoting internal production, in spite of the fact that this creates growing dependency on foreign countries. It encourages an agricultural model that has begun to show symptons of exhaustion in industrialized countries, although this implies the destruction of natural

resources. All this, which seems against all common sense from the point of view of the campesinos, is the creed of our modern administrators. Their blind faith in market mechanisms, in privatization and deregulation to the extreme, is only comparable to their vocation to favor big business.

This situation leads us to posit the need to participate in the process of approving NAFTA, not only in the fight for the parallel agreements but also in the effort to establish a Social Charter of Environmental and Labor Rights in our three countries. It also demonstrates the need to demand a Reconstruction Fund to finance sectors and regions negatively affected by the signing of the Agreement, including retraining programs, development projects, environmental protection, etc.

But we must also clearly assert the need to discuss an alternative development model that responds effectively to the needs of producers in the three countries. Today, more than ever, the possibilities of survival for Mexican small rural producers is closely linked to the possibility for the family farmer in the U.S. to receive a fair price for his or her grain, in line with real production costs, instead of subsidies that benefit large companies. Likewise, their survival is linked to the possibility of generating sustainable productive packages in the United States and Canada, to replace the old industrialized agricultural models that threaten our health, our environments and our economies. It would be worthwhile to ask ourselves: what good is it to U.S. corn producers to ship tons of their product to Mexico, replacing the Mexican producers, if it causes a massive migration to the United States? Besides depleting their new market, the social costs should also be taken into account.

Evidently, all these problems must be addressed and resolved by Mexican producers themselves. On the one hand, by modifying government policies that affect them and on the other, by working to create the technologies needed to increase productivity without abandoning the criteria of sustainability, and finally by creating forms of association that allow them to reach economies of scale without returning to the days when the nation's arable land was concentrated in the hands of the privileged few.

The economic integration that NAFTA has propelled is a challenge for all of us. A challenge that requires us to use our imaginations and our skills to influence the final form of the agreement, and to design a more just and sensible agricultural development model, one where "sustainability" is something more than a buzzword.

Mr. PETERSON. We have another panel of witnesses. We apologize for the length of this, but I think we have learned some good information. We have Karen Lehman from the Institute for Agriculture and Trade Development, Minneapolis; John Alic, Project Director, United States-Mexico Trade, a report of the Office of Technology Assessment; and Dr. Karen Thierfelder, economics professor, United States Naval Academy.

Please join us at the table. As you are probably aware, we on the Government Operations Committee swear in all our witnesses so as not to prejudice any of them. If you have no objection to that, please rise and raise your right hand.

[Witnesses sworn.]

Mr. PETERSON. Thank you for your patience. We hope you found the dialog instructive. We are going to start with Karen Lehman. Welcome to the committee. Your statements will be included in their entirety in the record, and you may summarize your statements.

STATEMENT OF KAREN LEHMAN, SENIOR FELLOW, THE INSTITUTE FOR AGRICULTURE AND TRADE POLICY, MINNEAPOLIS, MN

Ms. LEHMAN. Thank you. Our friends from Chihuahua really did an excellent job of presenting much of the material that I had planned to present, so I will just summarize some of the points that I think require more discussion.

Just to give you a little background, I have lived in Mexico and worked with peasant farm organizations. I have a great deal of sympathy for the conditions they are facing right now in relationship to the United States and the effect that our trade policy will have on their agriculture and their capacity to continue it in rural communities.

I would like to go over some of the numbers, just to get them before us again. It is just about impossible to determine how many Mexican residents have crossed the border into the United States, as we all know. The estimates are that in the last decade, there have been more than 3 million immigrants from Mexico, which is an average of about 300,000 per year, which amounts to 20 percent of Mexico's net population growth.

Those researchers who assure us that NAFTA will halt migration after 10 to 15 years must, therefore, also be assuming that the Mexican economy will be able to make itself attractive enough to employ 20 percent more of its population than is currently the case. Personally, I have a hard time believing that, but I do agree with all of them who agree that there will be short-term increases in migration that can be significant.

I want to begin with the Mexican Government. Luis Tellez, who is the Mexican undersecretary of agriculture, predicts an average annual exit of 1 million farmers each year for 10 years from Mexican agriculture, which amounts to 10 million people. In a study for the World Bank, there were predictions made of 700,000 who would be displaced in 9 years. University of California economists predict 800,000 in 6 years, 600,000 of whom would come to the United States.

Clearly, this is not a precise science, but this gives us a sense of the magnitude. All of these projections attribute migration to NAFTA and associated Mexican agricultural reforms, which you have been hearing about this morning. I think the most conservative estimate still implies that approximately one-third again as many migrants will enter the United States each year during the next decade as are currently arriving.

The problem is that despite the size of these numbers, they really could be higher. David Runsten, who is an economist at the University of California, Davis, believes that the predictions of all the macro economic model implications are low because they assume that irrigated land, which is currently producing corn in Mexico, can be freely converted to vegetable production.

In calculating the amount of labor employed in rain-fed agriculture, which we call "dry land agriculture," they underestimate by nearly half the amount of labor employed. Finally, they assume relatively high fruit and vegetable employment generation as a result of NAFTA. None of these assumptions reflect the realities of the Mexican countryside today.

The real question is whether or not those who stop producing corn can produce something else or get work in other Mexican industries.

You have already heard something about the changes in Mexican agricultural reforms and the Procampo program. I would be happy to answer questions on those programs. I wanted to talk about the potential for increased employment in fruit and vegetable production concretely. Again, I am going to use David Runsten's material. It is really unfortunate that he was unable to be here, because he is in Mexico right now, continuing to do research on this very question.

In his research, which is really on-the-ground microeconomic research, looking at how much farmworkers are paid, looking at how many buckets of tomatoes they harvest and trying to extrapolate that into the kind of employment that increased production in fruits and vegetables could generate, he found that under the best conditions, the expansion of fruit and vegetable production in Mexico would yield only 67,000 new jobs.

This is hardly adequate to absorb the hundreds of thousands who would be displaced by NAFTA and agricultural policy reforms, and it is less than one-fifth the figure of 400,000 jobs in this sector that was projected by the World Bank study, and which is the number that the Mexican Government uses when it talks about the potential for employment in the fruit and vegetable sector.

Having determined that fruit and vegetable production may not absorb displaced corn farmers, it is unfortunately equally problematic that they find employment in Mexican industry. We have heard how many jobs the maquila industry has created since 1965.

The other problem is that at the same time that the Mexican agricultural sector is going to be undergoing severe structural change, its manufacturing economy is going to be doing the same. Right now, 43 percent of Mexican workers work in organizations and companies of five or fewer employees. They are going to face increased competition from U.S. imports.

In addition, in the current climate, investment does not necessarily translate into employment. We have only to look at the former communist countries to see that although there is increased investment there, unemployment is an increasing problem. Increasingly, when you have older facilities that are dependent on larger numbers of workers, investment can actually displace people. We are talking about putting more people in the marketplace, not only from agriculture but from manufacturing. Manufacturing is going to be unable to absorb people who are displaced from the land.

The real question that I have as well is that there are really no benefits for farmers in the United States and in Mexico from the liberalization of corn. I have looked for them. The USDA is predicting that in 15 years, the United States will have increased its total exports by only 3 percent from sales to Mexico, and the price to farmers is expected to rise 6 cents per bushel by the end of the 15-year transition period.

Prices can fluctuate that much every day on the Chicago Board of Trade. Because there is no exchange rate mechanism in NAFTA, a 3 percent increase in exports can be eliminated with the currency fluctuation.

Nor, necessarily, will the United States experience short-term gain because in fact farmers could lose sales in the short term. In her analysis of NAFTA, North Dakota Commissioner of Agriculture Sarah Vogel pointed out that in some commodities, the United States may actually have more difficulty getting access to the Mexican market than previously in the short term.

Currently, for example, for corn, the United States is paying a duty of 2 cents per kilo and has exported an average of 2.9 million metric tons from 1989 to 1991. If NAFTA is approved, the United States will be allowed to export 1.5 million metric tons, tariff free, and after that a tariff rate quota of $205 per metric ton but not less than 215 percent will be imposed for gradual reduction over 15 years.

Commissioner Vogel asks the question related to beans, but I will ask it now relating to corn: Where will Mexico go for the quantities it needs after we have satisfied the 1.5 million that we are allowed? Are they going to come back to the United States and pay a 215 percent tariff, or are they going to go to other suppliers, like Argentina or Thailand, which are lower cost producers?

I think the real question before us is whether it is worth it to displace as many thousands of Mexican corn farmers as we are proposing to do through NAFTA and through the associated Mexican agricultural reforms for a 6 cents gain in price in 15 years? I think that is one of the questions before us, in terms of the agricultural implications of NAFTA.

Your question, Mr. Zeliff, about when problems started happening in agriculture in Mexico is also important. It is important to signal that NAFTA puts a lock on a set of policies that even if a democratically elected Presidential administration wanted to change the internal domestic agricultural policy in Mexico, they would be unable to do so. That is one of the greatest dangers that Mexican farmers face and will continue to push migration.

Thank you.

[The prepared statement of Ms. Lehman follows:]

NAFTA, Mexican Agriculture Policy, and U.S. Employment

Statement by

Karen Lehman, Senior Fellow
The Institute for Agriculture and Trade Policy

before the

Employment, Housing and Aviation Subcommittee

October 28, 1993

I am honored to have the opportunity to speak to you to today about the impact of Mexican agricultural reforms and NAFTA on Mexican farmers and the consequent effects on U.S. labor markets. Having lived in Mexico, I would like to share not only my analysis of the changes in North American trade and agriculture policy, but my concern for the farmers of Mexico, with whom I have worked and for whom I have great respect. I will focus my remarks on four basic points: the displacement of Mexican farmers by NAFTA and associated Mexican agricultural reforms, the potential for the absorption of displaced farmers by other agricultural sectors and Mexican industry, the efficacy of recently announced adjustment assistance programs for Mexican farmers, and NAFTA's impact on the supply and demand of farm labor in the United States.

One year ago I gave a speech to the Association of Farmworker Opportunity Programs outlining the crop by crop potential impacts of NAFTA on U.S. farmworkers. At that time I surprised them by saying that the crop that would most affect farm labor markets in the U.S. wasn't citrus, nor tomatoes, but corn: Mexican corn. That analysis holds. Farm labor markets in the U.S. will be at least if not more heavily impacted on the supply side by the increased migration of displaced Mexican corn farmers than it will by reduction in fresh vegetable exports.

Although it is virtually impossible to determine how many Mexican citizens have crossed the border into the U.S., analysts estimate that over the last decade, more than three million immigrants have come to the U.S. from Mexico. This is an average of 300,000 per year, 20% of Mexico's net population growth. Those researchers who assure us that NAFTA will halt migration after 10-15 years must also be assuming that the Mexican economy will be able to make itself attractive enough to employ 20% more of its population than is currently the case. I have a hard time believing that, but I am in agreement with those proponents of NAFTA like the Institute for International Economics when they predict significant migration out of Mexican agriculture over the next five to ten years.

Let's begin with the Mexican government. Luis Tellez, Mexican Undersecretary of Agriculture, predicts an average annual exit of one million farmers each year for ten years from Mexican agriculture. That's ten million people. Levy and van Wijnbergen in a study for the World bank predicted that 700,000 will be displaced in nine years, while University of California economists projected that 800,000 farmers would be displaced over the next six years, 600,000 of whom would come to the U.S. All of these projections attribute migration to NAFTA and associated Mexican agricultural reforms. The most conservative estimate still implies that approximately one third again as many migrants will enter the U.S. each year during the next decade as are currently arriving.

Despite the size of these numbers, there is evidence that they could be still higher. David Runsten of the University of California, Davis, believes that all of the macro-economic

model predictions are low because they assume that the sow's ear of Mexican agriculture policy reform can be turned into a silk purse. They assume that irrigated land currently producing corn in Mexico can be freely converted to vegetable production. In calculating the amount of labor employed in rainfed agriculture, they underestimate by nearly half. Finally, they assume relatively high fruit and vegetable employment generation. None of these assumptions reflects the realities of the Mexican countryside.

The key question is whether or not those who stop producing corn can produce something else or get other work in Mexican industry. The sheer importance of corn to Mexican farmers makes that a daunting proposition.

Almost half of Mexican land under cultivation is dedicated to corn. Corn represented 20% in terms of value of total agricultural production during the last three years. Whereas corn in the U.S. is produced exclusively for the market or to feed animals on a diversified family farm, corn in Mexico is produced almost exclusively for human consumption, and much of it never reaches the market, being consumed instead by the families of Mexico's poorest farmers. The poor produce corn to eat. Better off farmers produce it to sell. Dry land peasant farmers produce 60% of all corn in Mexico and 40% of the corn sold in the marketplace. Another 30% is produced by small and medium scale ejido-based peasants, many of whom have irrigation. The remaining 30% of the corn that reaches the market is produced by larger farmers.

Despite its importance to Mexican farmers and consumers, Mexican corn cannot compete with U.S. corn. There are several important factors. First, U.S. corn through the deficiency payment and Export Enhancement programs is artificially low priced, something which concerns U.S. as well as Mexican farmers. Comparisons are difficult, but conservatively Mexican productin costs are 30% higher than U.S. costs, and average yields are only slightly over 30 bushels per acre, while the U.S. average is 134. There are two harvests a year, which boosts output, but the annual costs are also doubled. Ninety percent of the 2.5 million farmers who planted corn last spring planted it on plots of land of less than eleven acres, and 40% on less than two acres.

The Mexican support price for corn, which is approximately double the U.S. target price, is the only thing that levels the playing field for Mexican farmers in the global marketplace. When the price of corn is reduced to the world price, Mexican farmers will be a long way from covering their cost of production and will not be able to compete with cheaper imports. Nor is there any pretense on the part of government officials or farmers alike, that they will make the attempt. The only game in town is conversion, and charity in the form of decoupled payments which function as welfare payments to the farmers who produce corn for their own consumption.

In fact, opening Mexican agriculture to competition on the world market is like opening up a greenhouse in January in Minnesota (if a greenhouse would even survive January in Minnesota.) The greenhouse is actually a good metaphor for Mexico's former agricultural policy. It was requisitioned by the revolution and built by the agrarian reform with the dual purpose of feeding a developing country and delivering on the promise of land and livelihood to the large majority of the nation's peasant farmers. Its chief products were a stable food supply and rural employment. The Congressional Budget Office Report on Agriculture in the North American Free Trade Agreement is right on the mark when it notes that Mexico's corn program was a "de facto rural employment and anti-poverty program."

Mexican agriculture policy created a controlled environment that favored Mexican producers and worked, at times, toward a systemic approach to the food system. The government controlled the agricultural economy, providing subsidies for the entire

productive apparatus including water, fertilizer, credit, seeds, irrigation, crop insurance. It guaranteed prices for key staples both to producers and consumers. It did so through a system of government food processing and marketing organizations that transformed raw commodities into flour, cooking oils, corn meal and milk powder and subsequently promoted their distribution through a network of retail stores that were very important, especially in rural areas. The government controlled the market by requiring import licenses, imposing tariffs and purchasing commodities itself to distribute in the local economy. Import licenses were important to Mexican producers because they were granted after Mexico's domestic producers had produced what they could to meet national demand.

Now the gardener has decided to rip the glass panels off and let the plants inside fend for themselves in the elements. The entire structure is being dismantled. Beginning in 1989, the government eliminated support prices on all grains except the key staples, corn and edible beans. As a result, many farmers converted to corn and bean production. From 1985 to 1990 the number of products requiring import licenses fell from 317 to 57. In 1988 after joining the GATT, tariffs were dropped to a maximum of 20%.

The most dramatic change was the dismantling of the ejido system which since the 1930's had provided land for the use of Mexico's peasant farmers. Half of Mexico's surface area is currently held by ejidos. Legally, the members of the ejidos, known as ejidatarios, could use the land, pass it on to their children, but not sell it or rent it. In fact, much land was clandestinely rented, especially in tourist development zones, at the edges of expanding urban areas, and in cases where the land was of especially good quality. With the change to the constitution approved in the winter of 1991-1992 by the Mexican government, the plots in the ejido became the private property of the farmers who formerly worked them.

The problem is that the privatization of the ejido will advance the conditions that the Mexican revolution was fought to eradicate: the concentration of land in the hands of the few. Privatization makes ejido land vulnerable to foreclosure as peasant farmers, many of whom have not had access to credit for three years, use their land as collateral for production loans. The farmers who left agriculture in my state during the 80's can symphathize all too well.

Moreover, the privatization of the ejido will accomplish one of the reform's primary goals, to open the land to private investment. In the past, investors were reluctant to invest in Mexico because no one had clear title to the land. Farm leaders fear that farmers desperate for cash will not have the bargaining power to make advantageous business arrangements with foreign and domestic capital, which will have the effect of reducing the number of farmers on the land.

The privatization of the ejido has tremendous cultural as well as economic repercussions in the Mexican countryside. Many farmers who participated in the agrarian reform and the creation of the ejido are still alive, as is the near-worship of agrarian revolutionary leader Emiliano Zapata. Migration is not merely the dislocation of people, but the destruction of culture, and the culture that has nurtured the nearly 30% of the Mexican population that lives in the countryside is seriously threatened.

Hard on the heels of the ejido reform is the dismantling of the government support programs including fertilizers, credit and marketing. The federal fertilizer distribution system, Fertimex was sold. The banks are being privatized. CONASUPO, the umbrella organization for the buying, processing and distribution of basic commodities, is being privatized, eliminating the marketing system most commonly used by Mexican farmers.

The last to go is the support price for corn which will be phased out over the next 10 years. Recognizing that these changes could wreak havoc on Mexican society, the Mexican government on October 4 of this year announced the creation of a new subsidy program, Procampo, that is touted as the adjustment assistance necessary to enable farmers to convert from grain and cotton production to more lucrative crops without suffering undue hardship. Other sectors in crisis such as coffee and wood products producers will not receive any benefits. Farmers who formerly produced grain and cotton will be paid a flat per acre payment of approximately $43 per acre to produce anything they wish for ten years, with the payments lessening over the next five to the end of the NAFTA transition period. At the same time, the support price for corn will be reduced.

Will this program stop the hemorrhaging from the countryside? It will not. For the 2.2 million farmers, primarily from southern Mexico, who raise corn almost exclusively for their own consumption, the subsidy payments on their average holdings of 10 acres amount to a payment of $430 per year which, though an important addition to their small incomes, is not enough to live on if crop conversions are unsuccessful. There is no technical assistance for alternative production or marketing. This is a general assistance welfare payment that redistributes wealth, but doesn't create it. These farmers have the most to gain in the short run, but will be ill-equipped to continue in agriculture after the payments stop.

Hardest hit are the very farmers who are producing the most corn for domestic consumption and who, in U.S. terms, would be considered most efficient. Those who produce 1-3 tons of corn per acre will have an advantage in the first two years, the per acre payment compensating for the reduction in the corn price. Those who produce more however, will experience an immediate loss. Ironically, many of these farmers converted to corn production from other grains when it was one of only two crops left with a support price. They hire seasonal workers to help with their crops. When they are no longer able to compete, they themselves may become seasonal workers for the few who are able to survive. We are witnessing the rapid transformation of a nation of farmers into a nation of farmworkers.

Beyond the concerns with the program's effects are the concerns that it will even be implemented. The budget is in place for the next two years, but after that must be approved annually. There is no legal structure to carry it out, and farmers worry about corruption of the process.

In sum, those that can adapt to the new conditions outside the greenhouse will thrive, while those that don't, won't. But here the metaphor ends. People aren't like hothouse plants. They don't just disappear if they don't fall on fertile soil. They seek out opportunity where they can find it. They will find it, not only in the industrializing cities in northern Mexico, but in the U.S.

The Mexican government has promoted the idea that farmers who stop producing corn can begin producing something else. In fact, the entire Mexican strategy is based on the assumption that changes are necessary in agriculture policy to allow Mexico to pursue its comparative advantage in fruit and vegetable production. This would lead us to assume that there is a great deal of room for expansion in this sector. Ironically, this is not the case.

David Runsten, an agricultural economist at the University of California, Davis, has conducted research on Mexican vegetable production that concludes that even under the best conditions, the expansion of fruit and vegetable production in Mexico will yield only 67,000 new jobs. This is hardly adequate to absorb the hundreds of thousands that will be

displaced by NAFTA and agriculture policy reforms, and less than one-fifth the 400,000 jobs in the sector projected by Levy and van Wijnbergen through macro-economic modeling.

There are several primary limitations to Mexico's fruit and vegetable production capacity. First are the limitations of the land itself. Sixty-three percent of Mexico's surface area is arid, thirty-one percent semi-arid, and only 6% receives adequate rainfall. Problems with access to water and increasing salinization of soils from deep-well irrigation plague the primary fruit and vegetable production regions of Sinaloa and Baja California, many of which, without irrigation, would revert to desert.

Second, despite the popular belief that lower wages in Mexico automatically translate into lower-priced products, in agriculture this is not true. Only a handful of crops are truly competitive with U.S. produce, and some of these are marketed counterseasonally in the U.S. Despite a 7:1 wage ratio between U.S. and Mexican field labor costs, exports of fruits and vegetables from Mexico by and large are not increasing. Mexican field labor is less efficient than that in the U.S., primarily due to management practices. Exports to the U.S. are likely to continue, even expand for historical crops, but a boom in the production of new crops is unlikely, thus limiting the real demand for new farm labor in Mexico.

Third, the Mexican government is providing neither technical assistance nor credit to peasant farmers who want to become vegetable producers, and given that this sector is the most highly capital intensive in Mexican agriculture, they will find it impossible to compete. Ironically, the majority of Mexicans are not accustomed to eating large quantities of fresh vegetables, thus the alternative most accessible to peasant farmers, the establishment of local markets, is unlikely to bear fruit. The fantasy that corn farmers will become vegetable farmers will come true only in those regions such as the Bajio in the state of Guanajuato where multinational companies contract with farmers to produce vegetables to be processed locally for export.

Having determined that fruit and vegetable production will not absorb displaced corn farmers, it is unfortunately equally problematic that they find employment in Mexican industry. Contrary to popular wisdom, increased investment does not automatically correlate with increased employment, especially in countries with aging plant infrastructure and labor intensive manufacturing. In the larger industries, retooling often results in layoffs. In an economy like Mexico's where 43% of the population is employed in businesses with five employees or less, the arrival of newer leaner businesses with lower production costs or an influx of competitive imports can also result in the closing of many small businesses. Thus, Mexican agriculture and industry will be restructuring simultaneously, creating instability for both the rural and urban work force.

The real tragedy is that this radical change in corn production has no real benefits for anyone. The USDA predicts that in 15 years the U.S. will have increased its total exports by only 3% from sales to Mexico. The price to farmers is predicted to rise only 6 cents per bushel by the end of the 15 year transition period. The use of these numbers in the NAFTA debate is questionable, given that the benefits of a 3% rise in total exports can be eradicated by a change in the rate of exchange and given that prices routinely fluctuate more widely than a 6 cent range. The U.S. today, through the use of its discretionary authority in the 1990 Farm Bill, could raise prices more than 6 cents per bushel for corn by raising the loan rate.

Nor will the U.S. experience much short term gain. In fact, farmers could lose sales in the short term. In her analysis of NAFTA, North Dakota Commissioner of Agriculture Sarah Vogel pointed out that in some commodities, the U.S. may actually have more difficulty

getting access to the Mexican market than previously. Currently, the U.S. is paying a duty of 2 cents per kilo on corn and has exported an average of 2,884, 931 metric tons from 1989-1991. If NAFTA is approved, the U.S. will be allowed to export 1.5 million metric tons tariff free, and after that, a tariff rate quota of $205 per metric ton, but not less than 215% will be imposed for gradual reduction over fifteen years. Commissioner Vogel questioned where Mexico will go for quantities over the tariff free quota. To the U.S. where 215% could be added to the price? Or to other suppliers like Argentina or Thailand?

Yet suddenly we find that the Administration using increased feed grain sales to Mexico as one of four options to pay for NAFTA, pinning its hopes on a projected rise in price of 3-4 cents which in theory would save the government $182 million by 1998. "More of farmers' income will come from the marketplace and less from Federal subsidies, as U.S. prices rise in response to increased export demand to Mexico," said Leon Panetta in a letter to Senator Moynihan yesterday. This reasoning doesn't reflect the reality of commodity markets, nor of the NAFTA corn provisions.

Conclusion:

NAFTA has been flawed from the beginning because the negotiators threw their hands over their eyes, ears and mouths and refused to put perhaps the most critical issue in U.S.-Mexican relations, migration, on the negotiating table where it could be more rigorously examined. Instead, they simply promised that NAFTA would eliminate the necessity to talk about migration because "jobs, jobs, jobs" would be created south of the border.

Farmworkers in the United States who are already competing for too few jobs will see downward pressure on already low wages and increasing difficulty in finding employment. Tragic as well is the destruction of social life brought about by an agriculture and trade policy bent on eliminating "excess resources" from the Mexican countryside.

NAFTA will put the lock on the agricultural policy reforms the Salinas administration put in place to grease the skids for a North American free trade zone. Even if a new political party came into power as a result of democratic elections in Mexico, which have hitherto not been achieved, the new President would be unable to put forth an agriculture policy that would reverse the flow of farmers from the land.

Mr. PETERSON. Thank you, Ms. Lehman. We appreciate your testimony and your briefness. We are going to have a vote. We will probably go about 5 minutes, and then we are going to have to take a recess. We will come back as quickly as we can and finish up. So, be warned. Mr. Alic, we will start with you and see how far we get here.

STATEMENT OF JOHN A. ALIC, SENIOR ASSOCIATE, OFFICE OF TECHNOLOGY ASSESSMENT, U.S. CONGRESS

Mr. ALIC. Thank you. I will be brief. Mr. Chairman, Mr. Zeliff, it is a pleasure for me to be here. We appreciate your request for OTA to testify this morning. My written statement is based directly on the OTA report, "U.S.-Mexico Trade: Pulling Together or Pulling Apart?" completed last year.

I would like to take a moment to point out that the subtitle of that report is intended to telegraph one of the central findings of the assessment as a whole. Labor, management, and society at large must pull together in the United States, or the social strains created by global trade and competition, of which NAFTA is only a symptom and only a single instance, could pull the United States apart.

The subtitle also conveys a second message. The United States and Mexican economies are already tightly linked. Agriculture illustrates these linkages at least as well as the manufacturing sectors that have drawn more attention. The United States and Mexican agricultural sectors are competitors with one another, but they are also complements to one another. On balance, our analysis suggests that the complementarities outweigh the competition between the two sectors. I will try and make that clear as we go along.

First of all, as I am sure you know, Mexico is not self-sufficient in food today. It will have even more trouble in the future feeding its people because its population is growing so rapidly. Mexico is very limited in supplies of good farmland and water for irrigation. The water that it does have is increasingly threatened with salinity. Together, these two factors set quite tight constraints on Mexico's ability to expand its agricultural production.

That limits the extent to which Mexican imports into the United States will compete with United States production in the future. It also inevitably limits the ability of Mexican farmers to feed the growing Mexican population.

The export sector in Mexico, of course, does have low costs, relatively high yields, and relatively high productivity levels, but the low costs come most of all from low-wage labor. Yields, even in the most productive sectors in Mexico, tend to be well behind those in competing areas in the United States, such as California, Florida, and Texas.

That depends, of course, on what the crop is. It depends on the location. It depends on the weather in the particular year when one does the comparison. It also reflects a broad-based deficit in agricultural technology in Mexico. This is a matter of cultivation practices, mechanization, seed varieties, agricultural chemicals, pesticides, herbicides, and so on. All of these, for maximum yields and productivity, must be tailored to local conditions.

Mexico does not have the agricultural research system or production capability to adapt agricultural technologies from elsewhere or to develop its own. This has also been a serious limitation on their ability to expand and to compete. For these reasons, OTA's analysis suggests that Mexican agriculture faces a more troubled future than United States agriculture. You have heard many examples of that this morning. It is particularly true of the traditional sector.

We heard, again this morning, about the subsidies and supports and their reduction. The point that I would make here is that Mexico's Government has been withdrawing agricultural supports and subsidies because the system has become insupportable. The Mexican economy, of course, has to support all of Mexico's people. When Mexico subsidizes its farmers, that places a burden on the people in the cities.

Mexico is not a wealthy country. Per capita incomes are only a little greater than one-tenth of those here. The system of agricultural supports, which has been built up for more than 50 years, one way or another has become too much of a drag on the rest of the Mexican economy. So change there is inevitable.

Mr. PETERSON. We are going to have to run over and vote. So I am going to recess the committee. We will be back just as soon as we can. It will probably be 10 minutes by the time we get over there and back. We will take a 10-minute break and be back as soon as we can. The subcommittee stands in recess.

[Recess taken.]

Mr. PETERSON. Continue, Mr. Alic.

Mr. ALIC. Thank you. I think I can finish in about 1 minute or so.

The movement of people, rather than the movement of goods, may have the greatest implications for the United States. I am speaking of the changes taking place in Mexico, really irrespective of NAFTA. For many years, large numbers of Mexican workers have been coming to the United States, legally or not, in search of higher wages and a better life. More than one-half of all Mexicans today are under the age of 20.

Mexico's economy would have to grow at rates in the vicinity of 10 percent annually to create new jobs for the many people who will enter the labor force in the years ahead. Mexico needs to create more than 1 million new jobs a year, just to stay even, much less to begin sopping up some of the hidden unemployment and underemployment that are pervasive in Mexico's economy.

Ten percent growth is substantially faster than Mexico was able to achieve, even during the prosperous years of the 1950's and 1960's. The United States already has the second largest Spanish-speaking population in the world. We have little choice but to prepare to absorb and put to work ourselves continuing inflows of Mexican immigrants. Thank you.

[The prepared statement of Mr. Alic follows:]

OTA TESTIMONY

STATEMENT OF

John A. Alic
Senior Associate
Office of Technology Assessment
U.S. CONGRESS

BEFORE THE

Subcommittee on Employment, Housing and Aviation
Committee on Government Operations

U.S. House of Representatives

ON

The Impact of Mexico's Agricultural Policies in Preparation
for the North American Free Trade Agreement (NAFTA)

OCTOBER 28, 1993

Congress of the United States
Office of Technology Assessment
Washington, DC 20510-8025

STATEMENT OF

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BEFORE THE

Subcommittee on Employment, Housing and Aviation
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U.S. HOUSE OF REPRESENTATIVES

October 28, 1993

Mr. Chairman and members of the Subcommittee, thank you for inviting OTA to testify on the impacts of the proposed North American Free Trade Agreement (NAFTA) on agriculture and on immigration. My statement is based directly on the pertinent sections of the OTA report U.S.-Mexico Trade: Pulling Together or Pulling Apart?, delivered to Congress last year. I might also point out that OTA is currently examining agricultural trade issues in the ongoing assessment Agriculture, Trade, and the Environment, scheduled for completion late next year.

Before summarizing the findings of OTA's NAFTA report concerning agriculture and immigration, let me take a moment to note that the subtitle is intended to telegraph one of the central findings of the assessment as a whole: labor, management, and society at large must pull together in the United States, or the social strains created by global trade and competition -- of which NAFTA is only one instance -- could pull the United States apart. The subtitle also conveys a second message: the U.S. and Mexican economies are already linked. Agriculture illustrates these linkages at least as well as the manufacturing industries that have drawn more attention.

AGRICULTURE

The agricultural sectors of the U.S. and Mexican economies complement one another more than they compete. The United States, for example, sends beef and grain to Mexico, while buying winter fruits and vegetables. The patterns of complementarity and competition depend in part on localized, static factors such as climate, rainfall, and arable land, and in part on dynamic factors including technology, labor costs, capacity utilization, transportation costs, and government policies (e.g., subsidies, trade restrictions). Imports from Mexico compete primarily with products from warm-weather States, and from Florida more than California or Texas.

Mexico's Two-Tiered Agricultural System

Alongside a modern, export-oriented sector, several million small-scale Mexican farmers grow subsistence crops (corn, beans) with traditional practices. On average, the traditional sector has low productivity; indeed, many small farmers cannot feed their own families. The modern sector has been able to capitalize on Mexico's inherent advantages -- which stem from climate and growing conditions as well as cheap labor -- to compete effectively with U.S. producers, particularly for products such as winter tomatoes.

For 75 years, Mexico's government supported small-scale agriculture through distribution of communal *ejido* lands and subsidies ranging from price supports and irrigation projects to low-cost fertilizer and diesel fuel. The outcomes included farms and food processing plants below minimum efficient

size, and rising imports of food. These policies began to change during the 1980s. With reductions in subsidies, some *ejidos* will be consolidated and improved, but much of the land is simply too poor to produce at competitive costs.

Today, many of Mexico's modern agribusiness establishments, some of which are foreign-owned, have low costs and relatively high yields and productivity levels. But their yields -- if much higher than in traditional farming -- lag well behind those routinely achieved in the United States, depending on the crop and location. This lag reflects a broadbased deficit in agricultural technology -- including cultivation practices, mechanization, and seed varieties and agricultural chemicals suited to local conditions. Mexican farmers must usually be content with seed and fertilizers developed for U.S. growers, who may have very different needs.

Where Mexico has achieved competitive costs, it has been in cases where low wages offset low efficiency. Fruits and vegetables, particularly those that require picking, trimming, and packing by hand rather than machine, are much more labor intensive than other agricultural products. These are the products -- tomatoes, cucumbers, broccoli, radishes, green onions -- in which Mexican growers and packers have been able to undercut U.S. costs. But even here, the seasonal nature of production means that Mexican products may compete with those from some parts of the United States, while complementing production elsewhere. For instance, Florida cucumber shipments reach their

highest levels during November-December and April-May, while California ships at relatively constant levels from May through November. Imports of cucumbers from Mexico reach their peak during the gap from December to March.

OTA's analysis indicates that Mexican agriculture faces a more troubled future than U.S. agriculture, particularly in the traditional sector. Improvements in agricultural technology transfer relatively slowly to Mexico because, for greatest effectiveness, hybrid seeds, fertilizers, herbicides, and pesticides may have to be customized for local growing conditions. Not only is this costly, but Mexico has neither the seed companies and agrochemical firms to develop and supply new products, nor the agricultural research organizations to support the underlying technology base. At the same time, rapid population growth, urbanization, and rising per capita income suggest that demand for food could increase at 5 or 6 percent per year. Mexico is a net importer of food now, and will probably become more dependent on imports in the future. Costs increased more rapidly in Mexico than in the United States during the 1980s, in part because of reductions in subsidies. Mexico's agricultural sector must overcome a decade of declining investment, and contain rapidly rising costs per unit of output -- all the while depending on outsiders for technology.

Trade, Competition, and Adjustment

OTA's analysis of U.S.-Mexico trade and competition in agriculture leads to the following overall conclusions:

o Despite cheap labor, Mexico could not expect to achieve across-the-board advantages in agriculture even if all trade restrictions were removed. The United States would retain large advantages rooted in agricultural research, including biotechnology. These advantages include superior plant and livestock varieties, and cultivation practices that have created yield and productivity margins sufficient to counterbalance Mexico's low labor costs (which in any case are sometimes offset by higher marketing and distribution expenses, poor transportation being particularly serious for perishable crops).

o Supplies of suitable land and water for irrigation set fundamental constraints on future growth, which will limit not only exports to the United States but also Mexico's ability to feed itself. Only 12 percent of the country's land is arable -- some 57 million acres -- compared with 464 million arable acres in the United States. Irrigated as well as rainfed farms are subject to the vagaries of weather, since most irrigation water comes from reservoirs rather than underground aquifers (many of which are being rapidly depleted in any case). Salinity is a problem, and competition for water is increasing as Mexico industrializes and urbanizes.

o Mexico's primary agricultural exports -- fresh winter fruits and vegetables -- compete most directly with production in Florida, which has a similar growing season. Florida is as far or farther from many major U.S. markets (e.g., the West Coast) as the regions in Mexico

with which it competes; as Mexico's transportation system improves, the advantages Florida has gained from rapid, reliable, low-cost shipping will diminish. Florida farmers would probably experience a disproportionate share of adjustment costs following NAFTA implementation.

- Growing seasons in California less frequently overlap those in Mexico. While substantial production and processing capacity -- notably for broccoli -- has moved to Mexico, California growers have had little trouble in switching to other crops. Generally speaking, farmers in States other than Florida and California are less likely to face direct competition with Mexico.

- Even though Mexico appears to have long-term, sustainable advantages for some kinds of fruits and vegetables, the United States has an overwhelming productivity edge in the staple crops of wheat and corn. With its rapidly rising population, Mexico will continue buying wheat, corn, and feedgrains from the United States.

- Mexico also has the potential to become an important market for grain-based products such as beef, depending on rises in income levels. Transportation costs for U.S. feedgrains would probably preclude the widespread relocation of cattle feeding to Mexico, even if Mexico could achieve comparable efficiencies. Because it is more costly to ship cattle than feed, beef packing will remain concentrated in the

U.S. grainbelt. While some meatpacking jobs may be lost to Mexico, U.S. packers have been aggressive in driving down domestic wages, reducing the attractions of Mexican labor. But because transportation is less of a barrier for poultry than for beef, Mexico's low labor costs could attract growing volumes of production and processing of chicken and turkey.

IMMIGRATION

For many years, large numbers of Mexican workers have been coming to the United States, legally or illegally, in search of higher wages and a better life. Policies in Mexico ranging from price controls on food products to credit allocation for small farmers have served in part as a rural poverty program and a tool to keep people from leaving the land for the cities. Coupled with the transformation of the *ejido* system, reduced subsidy levels promise to displace many small farmers from marginal land, which will no longer be worth cultivating. Many of these people will move to urban areas, where there will probably not be work for more than a few. Internal migration will put downward pressure on wages for unskilled workers in Mexico, with spillover effects in the United States. Higher levels of unemployment and underemployment in Mexico would also add to the pressures driving emigration.

Short of militarizing a 2000-mile border, there is no way the United States can stop the flow of migrants. Only socioeconomic development in Mexico that reaches into the lowest income levels will slow that flow

appreciably. If economic growth in Mexico leads to meaningful gains in wages and living standards, some of the pressure to emigrate will abate. But Mexico's income distribution is heavily skewed toward the wealthy. Should the benefits of a NAFTA go to those who are already well off, there might be little if any slowing of migration. Moreover, a NAFTA could lead to increased emigration in the short term by creating rising expectations in Mexico that could not be quickly satisfied -- or simply by creating new jobs near the border to serve as jumping-off points for migrants.

CONCLUDING REMARKS

A NAFTA would accelerate the integration of the U.S. and Mexican economies, including agriculture. Mexico must buy food abroad, and the United States will likely be the preferred source for many products. In return, Mexico will send larger quantities of fruits and vegetables northwards. In the past, U.S. growers faced with low-cost imports have successfully switched to other crops, more suited to the changing competitive environment. Nonetheless, many are worried that NAFTA transition periods will be too short and that they will have trouble identifying new crops and mastering new farming methods. Florida's agribusiness industry, notably, exhibits little of the dynamism, innovation, and confidence evident in California. Even so, growers in the various parts of Florida can be expected to specialize on the basis of comparative production, transportation, and marketing costs, and to succeed in carving out new markets.

It is the movement of people, rather than goods, that holds the greatest implications for the United States. Given Mexico's rapidly growing population and already high levels of unemployment and underemployment, improvements in wages and living standards promise to take decades rather than years. More than half of all Mexicans are under the age of 20. The country's economy would have to grow at rates in the vicinity of 10 percent annually to create new jobs for the many people who will enter the labor force in the years ahead. This is substantially faster than Mexico was able to achieve even during the relatively prosperous 1950s and 1960s. The United States already has the second-largest Spanish-speaking population in the world. We have little choice but to prepare to absorb and put to work continuing inflows of Mexican immigrants.

Mr. PETERSON. Thank you very much. We will probably have some questions here when we conclude. Next, we will have Dr. Thierfelder.

STATEMENT OF KAREN THIERFELDER, PROFESSOR OF ECONOMICS, U.S. NAVAL ACADEMY

Ms. THIERFELDER. I am grateful for the opportunity to speak with you today to present some of the research I have done with Mary Burfisher and Sherman Robinson.

Mexico is pursuing two policies. They are looking at trade liberalization under NAFTA and domestic agricultural reform. Both policies will dramatically affect agricultural output, employment, and the potential for migration from Mexico to the United States.

Currently, Mexico's domestic agricultural policies introduce a bias toward corn and grain production. The government agrees to buy corn at a guaranteed price, which is higher than the market price. The government also has marketing subsidies in other agricultural sectors and provides input subsidies for agriculture.

The purpose of the agricultural support is to maintain farm income. In the process, it leads to the overproduction of agricultural commodities, particularly corn. The Procampo program is designed to meet the same policy objectives, to maintain farm income, but to eliminate the production distortions.

The second policy that Mexico is pursuing is trade liberalization under NAFTA. Mexico has high trade restrictions in certain agricultural sectors. For example, in corn, Mexico imposes a quota. In 1991, the tariff equivalent of that quota was 94 percent, at least based on data that we have from the USDA. Likewise for wheat, the tariff equivalent was about 47 percent.

The simultaneous implementation of these two policies raises two interesting questions. First, which policy dominates in Mexico; and second, how do the policies interact? Will NAFTA ease or exacerbate Mexico's adjustment to agricultural policies, particularly since the Mexican Government appears committed to market reform in agriculture and is going forward with the Procampo program, regardless of whether NAFTA is approved or not approved.

To analyze the issues, we looked at policy simulations using a computable general equilibrium model to try to simulate, first, trade liberalization in Mexico and then trade liberalization with domestic agricultural reform.

Our results, looking at just NAFTA, looking at trade liberalization, suggests there will be some disruptions in Mexican agriculture, disruptions that you would expect, given the current structure of protection. We find that corn production declined 15 percent, wheat production 7 percent, oil seeds about 5 percent. Fruit and vegetable production expands in Mexico as the United States eliminates the tariffs, and we find an expansion of about 10.3 percent, with exports to the United States expanding 24.4 percent.

Reflecting the decline in Mexican grain production, United States exports to Mexico increase dramatically. We find corn exports increase 190 percent, and wheat exports increase 80 percent. Bear in mind, these are percent changes. According to 1988 data, Mexico's corn imports from the United States were a very small percentage of the domestic corn production.

There are also rural employment changes in Mexico associated with NAFTA. We find that corn employment declines 18 percent, about 310,000 workers. Wheat and feed grain decline about 70,000. Fruits and vegetables employment expands, and it can absorb about one-quarter of these workers. The net effect of NAFTA, we find, is an outmigration of about 280,000 workers to either urban Mexico or to the United States.

The second scenario we consider is, in essence, "cold turkey." Mexico eliminates trade restrictions and also eliminates its domestic support programs, meaning it eliminates the guaranteed prices, we remove the input subsidies to farm producers, and also subsidies to processors.

We find the addition of Mexico's domestic reform to have even more dramatic changes in Mexico. Corn output declines an additional 7 percent, making a total decline of 22 percent, oil seed production declines 46 percent, and wheat declines 16 percent. The United States total agricultural exports to Mexico increase 55 percent, with corn exports increasing about 207 percent.

There are also dramatic migration results coming from the domestic reforms in Mexico. We find 570,000 workers leave rural Mexico, and nearly 500,000 go to the United States.

To assess the long-run impact of NAFTA, we tried to simulate investment changes to get a sense of what happens as Mexico's capital stock grows, as their economy grows. Is there the potential to absorb these workers and offset migration pressures?

If we do a crude assessment of investment and increase the capital stock in Mexico about 10 percent, and we find that Mexican farm output increases 8 percent. While corn declines 11 percent, other sectors expand and absorb the labor, particularly as the fruits and vegetables sector expands.

We find that with capital growth, we reverse some of the migration pressures and in fact have workers migrating from the United States to Mexico.

The Procampo program is similar to the "cold turkey" scenario I described, the difference being that while eliminating the support to production, the government provides a direct income payment to the farmers. This serves to dampen migration. If you think workers migrate to maintain a wage differential or in response to higher wages in Mexico, getting the income subsidy will dampen some of the migration flows described in the "cold turkey" scenario.

In conclusion, our results suggest that the domestic reforms in Mexico will have a much stronger impact on the economy and on migration than will NAFTA. NAFTA will introduce some adjustment costs, particularly as the decline in corn production releases a lot of labor and not all can be absorbed in fruits and vegetables. However, in the long run, the increase in capital with the investment in Mexico is expected to ease the adjustment cost in Mexico and will be a benefit for the Procampo program.

In conclusion, the joint implementation of NAFTA and Procampo will be beneficial for the United States. It opens markets for United States grain producers, and it will dampen the migration flows that are anticipated anyway, given that Mexico is committed to domestic policy reform. Thank you.

[The prepared statement of Ms. Thierfelder follows:]

Assessing the Impact of NAFTA and
Domestic Agricultural Policy Reform on
Mexico's Agricultural Output, Employment, and Migration

Testimony presented to the Employment, Housing, and Aviation Subcommittee

of the

Committee on Government Operations
October 28, 1993

by,

Karen Thierfelder
U.S. Naval Academy

I. Introduction

On October 4, 1993, President Salinas announced the Procampo policy which dramatically changes the Mexican government's intervention in the agriculture sector. The government will eliminate its price support program for corn and beans as well as its marketing assistance for other agricultural products. It will replace this market intervention with a direct income transfer to farmers. As a result, the government will support farm income without distorting production decisions. Instead, producers will react to market prices. At the same time, Mexico is pursuing trade liberalization under the North American Free Trade Agreement (NAFTA). Mexico has high trade barriers in certain agricultural sectors; for example, the tariff equivalent of corn was 94% and the tariff equivalent of wheat was 47% in 1991.[1] These barriers will be eliminated under NAFTA, over a 15 year period for corn and a 10 year period for wheat.

Both the Procampo policy and NAFTA will affect agricultural output, employment, and migration pressure within Mexico. The joint implementation of domestic and trade reform raises two important questions: (i) which policy, domestic agricultural reform or trade liberalization will have a stronger impact on output, employment, migration in Mexico? (ii) how are the policies interrelated: will NAFTA exacerbate or ameliorate Mexico's adjustment to new domestic policies?

II. Trends in U.S.-Mexico Trade in Agriculture

The U.S. and Mexico are important to each other as agricultural trade partners. In 1990, Mexico was the third largest market for U.S. farm exports, following Japan and Canada, and

[1]From USDA data on producer and consumer subsidy equivalents.

the second largest supplier of U.S. agricultural imports, following Canada. U.S. markets are geographically diversified. Although a major agricultural trade partner, Mexico accounted for 11 percent of U.S. agricultural imports and less than seven percent of U.S agricultural exports in 1989. In contrast, Mexico depends heavily on the United States as a trade partner in agriculture. Sales to the U.S. accounted for 90% of Mexico's total agricultural exports in 1989. Eighty percent of Mexico's agricultural imports came from the U.S. in that year.[2] The dramatic difference in trade dependence suggests that trade liberalization will have a bigger impact on Mexico than on the United States.

Other characteristics of Mexico's economy suggest there will be large adjustments in Mexico's labor markets. Typical of a developing country, a large percentage of Mexico's labor force is employed in agriculture--23.8% for mexico verses 1.1% for the U.S.[3] When agricultural output changes, there will be substantial labor market adjustments.

Agricultural trade between the U.S. and Mexico is generally complementary. Mexico's principal exports to the United States are fresh and processed fruits and vegetables, live cattle, coffee, and beer. The major U.S. farm exports to Mexico are feed grains, oilseeds, live animals, meat, and dairy products.

Finally, the demographics in Mexico further complicate the labor market issue in Mexico. Given the population growth in Mexico, there has been a surge in the labor supply. Independent

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[2]See Burfisher, Robinson, and Thierfelder, 1992 "Agricultural and Food Policies in a United States-Mexico Free Trade Area," North American Journal of Economics & Finance, 3(2), pp. 117-139, for a more detailed description of the U.S. and Mexican economies.

[3]See Burfisher, Thierfelder, and Robinson, 1993, "Policy Noise Around the North American Free Trade Agreement: The Effects of Concurrent NAFTA, GATT, and U.S. Farm Policy Reform," unpublished manuscript.

of Procampo or NAFTA, Mexico will experience labor market adjustment and potential migration pressure due to the large number of young workers entering the labor force.

III. Domestic and Trade Policies in Mexican Agriculture

Mexico's current (pre-Procampo) farm programs have the dual objective of supporting rural incomes through high producer prices and subsidized inputs, as well as providing consumers with basic foods at low prices. To meet these goals, the government relies on both trade restrictions and domestic intervention in the market. Through CONASUPO (Compania National de Subsistencias Populares), the regulatory agency for agricultural products in Mexico, the government restricts imports by issuing import licenses. For example, in 1991, the tariff equivalent of Mexico's quota on corn was 94 percent. Corn imports were 20 percent of Mexico's total production in 1988.[4] CONASUPO also intervenes in the domestic market as it purchases, processes and sells agricultural products. However, CONASUPO has reduced its influence in the agricultural sector as the government liberalized agricultural prices in the late 1980's. In the early 1980's, CONASUPO intervened in the markets for corn, beans, wheat, rice, sorghum, milk, and oilseeds. Since 1989, CONASUPO intervenes only in the marketing of corn and beans, crops which are important dietary staples and which are produced by large segments of the rural population. In fact, Mexico's corn program has been described as the nation's "de facto rural employment and anti-poverty program."[5]

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[4]Data from Burfisher, Hanson, and Thierfelder, 1992, Data Base for a Computable General Equilibrium Model of the Agricultural Sectors of the United States and Mexico and Their Interactions, Agriculture and Trade Analysis Division, Economic Research Service, U.S. Department of Agriculture, Staff Report No. AGES 9225.

[5]See the Congressional Budget Report, 1993, "Agriculture in the North American Free Trade Agreement."

CONASUPO acts as a purchaser of corn and sets a guarantee price which exceeds the market price. It agrees to purchase all deliveries at the higher price. In 1992, the fall/winter guaranteed price of corn was NP$750/ton, about NP$300/ton over the cif price.[6] Given these incentives Mexico over produces corn. Note the difference between this program and the U.S. deficiency payment program. The U.S. government guarantees a price above the market price for certain crops such as corn and wheat, but it restricts the amount of the crop covered by the program. CONASUPO is committed to purchase all corn delivered to it at the guarantee price. It presently purchases 30 percent of the corn crop.[7]

The Mexican government includes provides subsidies to offset the cost of credit and fertilizers. These input subsidies have been declining over time.[8]

After purchasing the corn at the higher guarantee price, CONASUPO then sells corn to processors at a price below the guarantee price. In effect, the government provides a marketing subsidy for corn.

The government also helps market other agricultural commodities in Mexico. ASCERCA (Apoyos y Servicios a la Commercialization Agropecuaria), the marketing agency in Mexico, subsidies purchasers of domestic sorghum, wheat, rice, and soybeans. The government provides a subsidy equal to the difference between the domestic price and the world price of the commodity.

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[6]Data from SARH, "Propuesta de Programa Integral de Apoyos a Productos Basicos.

[7]USDA document on Mexican Farm Programs.

[8]USDA data on producer and consumer subsidy equivalents for Mexico.

IV. Analysis of Trade Liberalization and Domestic Policy Reform

To determine the impact of both Mexico's current domestic programs and NAFTA on employment and migration, we do simulations using a computable general equilibrium (CGE) model in which we have detailed agricultural sectors and we model U.S. and Mexican domestic farm programs.[9] The following scenarios are relevant to analyze the relative importance of NAFTA and domestic agricultural reforms on output, employment, and migration in Mexico:

1. Eliminate bilateral tariffs and quotas between the United States and Mexico to focus on the changes due to NAFTA alone.

2. Eliminate bilateral tariffs and quotas between the United States and Mexico, as well as complete removal of Mexico's current agricultural program. This entails eliminating the guarantee price support program, eliminating all input subsidies, and eliminating all marketing subsidies.

Mexico's agricultural exports increase 10 percent in the first scenario. The fruits and vegetable sector expands by 10.3 percent with exports to the United States increasing 24.4 percent reflecting the elimination of the U.S. tariff in that sector. Mexico's highly protected sectors contract: output declines by 15 percent in corn, 7 percent in wheat, and 5 percent in oilseeds. In the United States, total agricultural exports to Mexico increase by 26 percent. Corn and wheat exports increase dramatically, by 190 percent and 80 percent, respectively. Fruits and vegetable exports to Mexico expand, reflecting the intraindustry trade in that sector. U.S. output expands slightly, despite the dramatic increase in imports from Mexico. This increase in output reflects the increase in labor supplied as rural labor migrates from Mexico to the U.S.

Accompanying the large shifts in sectoral output under full trade liberalization are

[9]These results are from Burfisher, Robinson, and Thierfelder (1992).

changes in rural employment. Mexican corn employment falls 18 percent (310,000 workers) ad employment in wheat and feed grains falls by an additional 70,000. Employment in fruits and vegetables, a sector that expands when the U.S. removes its tariffs, absorbs about one-quarter (90,000) of these workers. Sectoral shifts in Mexico's processing agricultural industries are very small, with shifts of under 10,000 workers in each sector. The inability of Mexican fruit and vegetable expansion to fully absorb displaced corn labor accounts for rural outmigration of 280,000 workers into urban Mexico and the U.S.

The effect of quota removal on Mexican corn output and employment, and the resulting migration flows, is one of the central agricultural issues in the negotiation of NAFTA. We assume that domestic and imported farm products, including corn, are highly substitutable. This is consistent with the observed protection structure. Mexico would not need high trade barriers if U.S. and Mexican corn were poor substitutes. An alternative view is that the white corn that is produced in Mexico and the yellow variety imported from the U.S. are poor substitutes.

The output, employment, and migration results under trade liberalization are sensitive to the assumed parameter values of the elasticity of substitution between the imported and the domestic variety of corn in Mexico. When Mexican consumers have a strong preference for white domestic corn over imported yellow corn, the removal of quotas causes imports to increase only 35 percent, compared to 190 percent when there is high substitutability. Mexican corn output contracts less than two percent, and rural outmigration rises by only 60,000 workers. Conversely, a very high level of substitutability causes rural outmigration to increase by nearly 500,000 workers, and U.S. corn exports to Mexico increase nearly fivefold. The Mexican

consumer's preferences for corn is clearly an issue of tremendous importance for the trade negotiations, an warrants further research.

In the second scenario, we remove all subsidies to Mexican farmers and food processors, and allow retail food prices to adjust freely. This is the "worst case" for Mexico since it liberalizes agriculture while its major trade partner retains high domestic support, through deficiency payments, for commodities Mexico imports, namely corn, wheat, and feed grain.

Mexican output of crops receiving high input subsidies (wheat, corn, oilseeds, and cotton) contracts dramatically with the removal of all agricultural subsidies. Output of corn, which dropped by 15 percent under full trade liberalization, declines an additional percent from the base year level following complete subsidy removal. Output of oilseeds declines 46 percent, and wheat declines 16 percent from the base year levels, compared to 5 and 7 percent declines under free trade alone. In total, Mexican farm output declines 2 percent compared to a 0.3 percent decline under free trade alone. Again, declining output of the subsidized crops is partially offset by the expanded output of fruits and vegetables.

As Mexico's farm output declines with subsidy removal, U.S. farm exports to Mexico rise by 55 percent compared to the base year. This is an additional 12 percentage point increase in U.S. farm exports compared to full trade liberalization.

When all subsidies are removed, Mexico's processed food output contracts by 2 percent. The sector faces both increased competition as NAFTA eliminates relatively high trade barriers in those sectors and rising costs of agricultural inputs as domestic farm output contracts. Output of dairy, grain milling, corn milling, and oilseed products contract sharply. U.S. processed food exports to Mexico increase by 10 percent in this scenario, compared to 7 percent under free

trade alone.

Removal of Mexican agricultural subsidies in combination with NAFTA can be expected to have unfavorable effects on rural and urban unskilled wages in both the U.S. and Mexico, as 570,000 workers leave the Mexican farm sector. Nearly 500,000 workers migrate to the United States. U.S. rural and urban unskilled wages both decline by 2.7 percent.

Our results suggest Mexico's migration is sensitive to the level of agricultural support. While trade barriers matter, eliminating the input subsidies in corn have a more dramatic impact on migration. Furthermore, trade liberalization creates job opportunities in Mexico for the fruit and vegetable workers. Furthermore, our scenarios impose trade liberalization immediately. According to the agreement, trade liberalization will be phased in over a 15 years period. The impact of NAFTA will be minimal compared to changes in domestic policy reform.

The dynamic gains to Mexico from NAFTA will likely exceed the comparative static gains. We simulate the effects of a 10 percent increase in Mexico's capital stock in conjunction with trade liberalization. We assume investment in Mexico does not reduce investment in the United States, and that the capital stock is domestically owned.

Farm output in Mexico increases by 8 percent when trade liberalization is accompanied by a capital stock increase (compared to a 0.3 percent decline under NAFTA without capital growth). Output of Mexican corn declines 11 percent. expanding Mexican employment opportunities in other farm and food processing sectors fully absorb this labor, and reverse the migration flows, with 90,000 workers returning to rural Mexico and 160,000 returning to Mexico from the United States.

Mexican agricultural exports to the U.S. expand 14 percent. U.S. agricultural exports

to Mexico increase 37 percent, compared to 26 percent under NAFTA without capital flows. The United States benefits from Mexico's increase in income, which stimulates an increase in demand for U.S. products.

While this simulation is a crude description of investment decisions, it does suggest output and employment changes in Mexico in the long run. NAFTA is anticipated to stimulate investment and economic growth in Mexico is beneficial to the U.S. for two reasons--increased exports to Mexico and a reduction in migration pressure.

V. Policy Reform In Mexico

Mexico's program of domestic price support is only effective if the government restricts imports. With free trade in corn, producers could import corn cheaply and sell it to CONASUPO at the higher guarantee price. Since Mexico is committed to trade liberalization, it is inevitable that it would revise its domestic programs. The pre-Procampo policy is unsustainable when the country allows free trade. The new policy also reflects Mexico's commitment to free market principles. The Procampo policy allows the government to support agricultural incomes without affecting the market price to which producers react. As a result, the government does not distort production.

The Procampo program is a completely decouple income support program. Payments will be made available to support farmers who have historically planted any of the following crops: maize, dry beans, wheat, cotton, safflower, soybeans, sorghum, rice, or barley. These products currently benefit from government support programs. The government will give a direct income support to these farmers to compensate them for the reduction in support prices. To determine the allocation of income transfers, the Ministry of Agriculture and Water

Resources has constructed a comprehensive directory of producers. Payments will be made on a per-hectare basis; payments will be calculated based on the average areas planted with the eligible crops in the previous three years. The payments also will be based on average fixed yields. There is a fixed amount of land eligible for the program.

The current system in Mexico is biased towards large commercial farmers. The subsistence farmers consume crops, primarily corn and beans, on the farm, rather than marketing them through CONASUPO. As a result, they do not benefit from the higher guarantee price system. These farmers will benefit under the new program because the payment they receive will be based on the historical yields. To introduce fairness, the Procampo program includes minimum and maximum payments.

Procampo will be fully implemented in 1995. There is a two year transition period in which guarantee prices are gradually removed. The payments to farmers will be fixed in real terms for ten years and will be phased-out in the next five years.

VII. Effects of Procampo on Agricultural Output, Employment, and Migration

The effect of the Procampo program on migration is unclear. Farmers receive their checks, but are not obligated to produce on the land, since the program is completely decoupled from output decisions. Instead, they can move to the United States and collect their income.

However, if wage differentials motivate migrants, the program reduces the incentive to migrate as it supplements farm income.[10] Assuming that workers migrate based on wage differentials, the Procampo program will reduce migration to the United States.

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[10]Note there is also a potential wage change for farmers as the composition of agricultural output changes. One must include the effect of both changes in the wage comparison that the farmer makes.

The Procampo program is anticipated to reduce corn output in Mexico as it eliminates the incentive to overproduce. One anticipates that output in sectors which are competitive at world prices, such as fruits and vegetable sectors, will expand.

Our earlier assessment of domestic reform provides an upper bound on anticipated employment, output, and migration changes that will accompany domestic reform in Mexico. Procampo eliminates production distortions, therefore changing the composition of output. However, output is unlikely to decline as much as under complete domestic policy elimination. Instead, there will be less of an outflow of rural labor as Procampo is likely to offset migration pressure. The farm output contraction in Mexico will not be as dramatic as the changes described in scenario two. One expects an increase in U.S. exports to Mexico, but not as extreme as in scenario two, again because output does not decline as dramatically in Mexico.

NAFTA will also affect the composition of agricultural output in Mexico. Corn production is expected to decline further as imports appear cheaper. Fruits and vegetable production will expand in Mexico, providing job opportunities for displaced agricultural workers. Based on our analysis of complete domestic reform, Procampo is expected to have a bigger impact on the Mexican agricultural sector and migration. While NAFTA will force certain sectors in Mexico to contract, it will allow others to expand.

In the long run, NAFTA is expected to reduce migration pressures further. As investment into Mexico increases and Mexico grows, workers will remain in Mexico rather than migrate to the U.S. in response to wage differences.

IV. Conclusion

Both domestic agricultural reforms and NAFTA are expected to change output and

employment in Mexican agriculture. Each policy also contributes to migration pressure and output changes in the U.S. Our simulation results suggest that domestic agricultural reforms will have a stronger impact on agricultural output change, employment, and migration changes. While NAFTA contributes to the displacement of agricultural workers as Mexico eliminates barriers in sectors such as corn and wheat, NAFTA also provides opportunities for other sectors, namely fruits and vegetables to expand. In the long run, NAFTA will complement Mexico's domestic agricultural reform. An expected dynamic gain from NAFTA is increased investment into Mexico. As Mexico attracts capital, jobs will be created and there will be less pressure for migration from rural areas.

Mr. PETERSON. Thank you. Since you testified last, you are highest in my mind here.

On the wheat situation, you say here that wheat exports from the United States are going to increase 80 percent. From what level is that? What year?

Ms. THIERFELDER. Based on 1988 data.

Mr. PETERSON. When is this going to happen? We have lost 75 percent of our exports since 1988. Our Mexican exports today are one-fourth of what they were in 1988. You are saying that we are going to be 80 percent up from what we were in 1988?

Ms. THIERFELDER. This is eliminating Mexico's current tariffs and quota structures. Mexico still retains a pretty high distortion, keeping out imports. When they allow imports in, then that will improve United States exports to Mexico.

Mr. PETERSON. Are you sure?

Ms. THIERFELDER. As sure as I can be with my model.

Mr. PETERSON. I will tell you what has happened. The Canadian Free Trade Agreement gave Canada a 50 cents per bushel advantage over the United States, and they took our entire market away from us. The Canadians refused to put agriculture on the table; it is not part of NAFTA. We have two bilateral agreements. If there is going to be any increase in the potential market in Mexico, it is going to go to the Canadians. I do not see how we are going to get an 80 percent increase. The Canadians might get an 80 percent increase, but it will not be us.

Ms. THIERFELDER. Currently, Mexico depends very heavily on the United States for trade and agriculture. How much agricultural trade in wheat is coming from Canada to Mexico? Is there a strong trade dependence?

Mr. PETERSON. They took our market away from us because we were stupid when we negotiated the Canadian Free Trade Agreement—or duplicitous, whichever view you want to take. Jim Baker, after promising our farmers he was going to go to Canada and protect us, sold us down the river or was too stupid to know what he was doing and allowed the Canadian freight adjustment to be considered not a subsidy. Therefore, they have a 50 cents advantage over us under GATT.

I am just questioning your study here. You say that there is going to be 80 percent. Maybe there will be more wheat imports into Mexico. If I know about it, if there is, it is not going to go to the United States. It is going to go to Canada.

Ms. THIERFELDER. Our model basically just includes the United States and Mexico, because we were focusing——

Mr. PETERSON. How could you do that? How could you leave Canada out of this?

Ms. THIERFELDER. Primarily because the concern is with the extreme differences between the United States and Mexico, Mexico being a developing country and the United States being a developed country. There are extreme differences in wages, and that is where the migration flows are expected. To focus on the United States-Mexico trade, we restricted ourselves to just the United States and Mexico.

Mr. PETERSON. I think that, at least in agriculture, you made a serious mistake when you did that. In a lot of these commodities,

what is happening in Canada is very significant. We have sugar coming through Canada. Canada does not produce any sugar, yet there are imports. Peanuts come in from Canada.

That is the problem with these trade agreements: Either the people who negotiate them do not know what they are doing or they do not care or, more likely, they are in the hip pocket of the big agribusiness community, which wants to use these trade agreements to do in our domestic policies. They are doing a good job of it.

I think you ought to look at that portion of your work here, because I do not think it is necessarily right.

Ms. Lehman, do you think there is going to be a phaseout of commercial corn and bean production in Mexico? Is that what I understand you think is going to happen with this program?

Ms. LEHMAN. It is headed that way. Mexican farmers who produce for their own consumption will continue to produce corn and beans. The people who are hardest hit by changes in Mexican agricultural policy ironically are the ones who are the most productive in corn under the Procampo program.

Procampo actually hits the big farmers hardest. It hits the more industrialized peasant farmers severely. Anybody who produces 1 to 3 tons of corn will come out OK in the Procampo program early on, which is why the assumption that it is like a welfare program for the smallest farmers is accurate. But for the bigger farmers, anybody who produces more than, say, 5 or 6 tons, is going to take a hit, and it is going to be a worse hit year after year.

Mr. PETERSON. Why are they taking a hit?

Ms. LEHMAN. Right now, they are dropping the support price. I can do these numbers for you to put them in the record.

Mr. PETERSON. I understand, but do not they all get the same amount per acre, no matter how many acres they farm? Is there some limit?

Ms. LEHMAN. At the beginning, they are still going to receive some of their support price for corn. Let us say you are producing 1 ton of corn per hectare. You are going to get 650 new pesos in the support price, plus 330 new pesos.

Mr. PETERSON. It has to do with the productivity, the yield? It has to do with the yields that they are producing?

Ms. LEHMAN. The yields will be affected. They will get money for their production as long as the support price is still in effect. Say I am producing 1 ton of corn. I get 650 new pesos for that ton; last year I got 750. I would get 330 new pesos for my direct payment. I am coming out ahead, as long as I am only producing one or two. If I am producing 10, I am going to lose what I would have had before under the support program.

Mr. PETERSON. You mean 10 tons per acre, you mean?

Ms. LEHMAN. Yes.

Mr. PETERSON. There is that big a difference?

Ms. LEHMAN. No. The direct payment from Procampo is not going to make up the difference in the loss in the support price for people who produce more corn per hectare.

Mr. PETERSON. At what level is that?

Ms. LEHMAN. It kicks in somewhere after 3 or 4 tons.

Mr. PETERSON. What is the average yield?

Ms. LEHMAN. The average yield is two.

Mr. PETERSON. What is the disparity? It goes from 1 ton per hectare to——

Ms. LEHMAN. There are people in Mexico producing 14.

Mr. PETERSON. Fourteen tons per hectare?

Ms. LEHMAN. Yes. So the bigger farmers are going to be more heavily affected by Procampo.

Mr. PETERSON. They basically are putting the people on welfare?

Ms. LEHMAN. Right.

Mr. PETERSON. Is the money there to sustain this? Is it written in? Is it not just for a year or two, and they are saying maybe it will continue?

Ms. LEHMAN. The budget is only approved for 2 years. It would have to be approved annually by Congress every year after that. There is no legal structure to implement the program at this point; it is a Presidential initiative.

Mr. PETERSON. So that 2 years from now, they could say, "We are going to discontinue it?"

Ms. LEHMAN. That is entirely possible.

Mr. PETERSON. When is the support price phased out under the program? When does it go down so there is no government support price?

Ms. LEHMAN. It will be completely gone in 15 years, but it will be dramatically reduced in 10.

Mr. PETERSON. I was reading about this. It seemed to me, it went down the most in the first 5 years or something, and then it keeps phasing out.

Ms. LEHMAN. Yes. It is a graduated phaseout.

Mr. PETERSON. So that is built in for 15 years, but the welfare payments are only there for 2 years?

Ms. LEHMAN. The promise of the program is that for 10 years, they will receive the same payment in real dollars per hectare. After 10 years, it will decline fairly rapidly and zero out at 15 years.

Mr. PETERSON. But that is not written into the statute?

Ms. LEHMAN. That is not written into the legal structure. It is not in the budget.

Mr. PETERSON. The theory is that these people, as they reduce the prices of corn and beans, they are supposed to switch to other crops. Right? That would be one idea?

Ms. LEHMAN. There is really no evidence to indicate that the people who are displaced out of corn production will move into fruit and vegetable production, which are the crops that the Mexican Government is proposing could absorb those farmers.

Mr. PETERSON. Are you familiar with the Chihuahua area?

Ms. LEHMAN. Somewhat. I am more familiar with southern Mexico actually.

Mr. PETERSON. I guess they grow apples around there in that area. Could they switch to fruit and vegetables in that area?

Ms. LEHMAN. Apples are actually going to be very hard hit by NAFTA. The apple industry in the United States is projecting large increases in exports to Mexico. When I met with the national fruit and vegetable producers organization in Mexico, they said that the

apple producers in the north were going to be some of the losers in the agreement.

Mr. PETERSON. So that would not be an alternative to switch to more apples. Can they grow tomatoes and things like that there?

Ms. LEHMAN. The products that are counter seasonal with the United States will probably continue to have an annual 25 percent increase, which is what they have been showing historically. The problem is that the projections are for greater expansion when people are projecting more employment in fruits and vegetables.

Also, they are projecting that it will come from new production in Mexico. The theory is that because Mexican labor is cheaper, fruit and vegetable producers will move to Mexico. In fact, even though there is a wage ratio of 7:1 between the United States and Mexico, that does not necessarily make Mexican produce cheaper because there are problems with transportation, processing, general infrastructure, and labor is less productive.

It is not as if there will be a great deal of new fruit and vegetable development. Some options might be frozen orange juice concentrate, if the companies decide to invest in that in Mexico. Also asparagus is something they might expand. There are some crops here and there.

Mr. PETERSON. Mr. Zeliff has a couple of questions, and then we will have to go to vote again.

Mr. ZELIFF. Thank you, Mr. Chairman. I will take my 2 minutes and do the best I can. It is fun to be in the minority.

As an economist looking at NAFTA, do you feel, Ms. Lehman, that this is an agreement that probably is in the best interest of the United States? Do you think we get the better part of the deal?

Ms. LEHMAN. That is a hard question. I do not think it is good deal for anybody that I care about. I am talking about family farmers in the United States, Canada, and Mexico.

Mr. ZELIFF. What about the wheat and the 80 percent that you talked about, that you had a little disagreement with the chairman.

Ms. LEHMAN. I did not have a disagreement.

Mr. ZELIFF. Then I will refer that one to you?

Ms. LEHMAN. I think this is a bad deal. What we really need in North America is a development agenda, and this agreement does not provide it. It does not address environmental concerns, it does not address natural resource policy in the way it should, and it does not address agriculture in the way it should. I frankly think that Mexico should be able to protect corn, in the same way that I think we should sustain the United States sugar program.

Mr. ZELIFF. What about beyond agriculture?

Ms. LEHMAN. I think it is a bad deal.

Mr. ZELIFF. Can you find anything at all that is good about it?

Ms. LEHMAN. I think the one thing that is good about it is that we have started talking about these things. People understand that there are things happening on the Mexican border that we never knew about before. I personally have talked with many more Canadians and Mexicans in the last 3 years than I ever have before. Even though I lived in Mexico, we did not talk about these things.

Mr. ZELIFF. How do you figure out why so many economists in the United States feel that this is a net win for the United States? How do you put your differences beside theirs?

Ms. LEHMAN. I think we have potentially ideological biases that are different. I think they are ideologically biased for free trade. That is what they are taught in economics schools, that free trade is a greater good. I have another view, which is that sustainability, community, and the protection of local resources are important. I do not agree with free trade the way it is being codified in these trade agreements.

Mr. ZELIFF. We all have honest disagreements, and that is what is healthy about our country, I think.

What about the comment on wheat, your comment on the United States being able to export 80 percent additional?

Ms. THIERFELDER. My comments are based on a study looking at United States trade with Mexico, and I am less aware of the changes that are going on with Canada. Perhaps Canada, not the United States, is exporting more to Mexico.

Mr. ZELIFF. Excluding Canada, you made a comment that from 1988, it would help at least wheat?

Ms. THIERFELDER. Yes, wheat also. Particularly corn, as Mexico gets out of the inefficient production of corn, that creates opportunities for United States producers.

Mr. ZELIFF. So would you feel that the United States benefits from the agricultural policies of NAFTA?

Ms. THIERFELDER. Yes, overall. There will be some adjustment in fruits and vegetables. People in Florida are very concerned with tomato competition from Mexico. I think the overall benefit will be U.S. consumers who get the benefit of goods at cheaper prices. I also think the concerns are exaggerated in the United States, because although Mexico is our third largest trade partner in agriculture, our trade is very diversified. So the impact on the United States——

Mr. ZELIFF. What about beyond agriculture? Do you see any benefits, in terms of an improvement in trade?

Ms. THIERFELDER. Yes. I see both the United States and Mexico moving into the production of what they are more efficient in. I see long-run gains from Mexico as their economy develops. There are spill-over benefits for the United States because it is beneficial to us to have a wealthier neighbor on the border. Since they import primarily from the United States, the U.S. export companies will benefit.

Mr. ZELIFF. So productivity remains the king, in terms of our ability to compete worldwide with Mexico, Canada, or anyone else?

Ms. THIERFELDER. Yes.

Mr. ZELIFF. Thank you very much. Thank you, Mr. Chairman.

Mr. PETERSON. I would like for you and Dr. Thierfelder to come to my district and explain to the farmers that they will have an 80 percent increase, when they have lost 75 percent of their market in Mexico.

Mr. ZELIFF. One nice thing about this is that we have a chairman and a ranking Republican who have very honest disagreements.

Mr. PETERSON. This is not any kind of philosophical debate. This is a fact. We have one-fourth of the exports that we used to have. This is a fact.

Mr. ZELIFF. But that was not caused by NAFTA.

Mr. PETERSON. It was caused by the Canadian Free Trade Agreement. The Canadians have bought a railroad line all the way to Kansas City, and they are going to buy a line all the way through the United States so that they can ship directly from Canada into Mexico, not only wheat but all of these other commodities. One of the reasons that NAFTA is going to be defeated is because of this. There are a lot of us who used to be free trade who are now smarter than we used to be, after we have experienced some of this free trade.

Mr. ZELIFF. With that, let us vote.

Mr. PETERSON. Do you want to vote? On NAFTA or what?

Mr. ZELIFF. Yes.

Mr. PETERSON. I want to thank you all. I am sorry we did not have more time. We appreciate your being with us. We will stand adjourned.

[Whereupon, at 12:50 p.m., the subcommittee adjourned, to reconvene subject to the call of the Chair.]

APPENDIX

Material Submitted for the Hearing Record

SARAH VOGEL

North Dakota Commissioner of Agriculture
On the American Free Trade Agreement before the United States Commission on Commerce, Science, and Transportation, July 1993

■ The topic of NAFTA has been swirling through the capitols of federal and state governments, talk shows, newspapers, and television; farmers talk about it at kitchen tables and main street cafes; executives talk about it in board rooms. Lobbyists talk about it everywhere. Most of this talk has been rhetoric.

I'm tired of the rhetoric of NAFTA. Today, I will discuss the reality of NAFTA as it will affect my state, North Dakota.

North Dakota is a major agricultural state - we are first in production of all wheat, first in durum and hard red spring wheat, first in barley, first in flax, first in sunflowers, first in edible beans. In addition, we have a $600 million cattle industry that focuses on feeder cattle production. We are among the top five states in several other commodities including sugarbeets, potatoes, oats, honey and rye.

Building on our rural base, North Dakotans have paid a lot of attention to our environment. The motto of my department is "Strength from the Soil," and we mean it. North Dakota is first in clean air and clean water. We are the first state to have approval from the EPA on our endangered species protection program and we are the first state in our region to submit a program to protect groundwater from agricultural chemicals.

Although agriculture is our primary industry, we are working very hard to expand jobs - in fact, last year, we had the highest net job growth since 1979 despite difficulties in agriculture and energy industries. We have many programs, under the overall legislative umbrella of "Growing North Dakota," that are designed to expand manufacturing, tourism and service jobs, find new domestic uses and export markets for our agriculture products, and keep our farmers on the land.

In my office we work very hard to sell food and agricultural products abroad. We have gained $11.7 million in sales just from trade show contacts in the last two years. Our main target markets are Mexico and Canada.

I am very much for trade. And, I am adamant against NAFTA. I am not against NAFTA because I am isolationist or afraid of competition. I am against NAFTA because it does not provide for adequate opportunities to our producers, because it imposes drastic new tariffs on some of our crops, and because it subjects our highly regulated, safety conscious producers to competition by production methods that would be illegal in the United States. As a state official, I am also opposed to NAFTA because of its cavalier treatment of sound state laws and regulations.

The First Big Myth of NAFTA rhetoric is that it promotes free trade in agriculture. In reality, it destroys short and intermediate term trade opportunities, as to a number of crops.

If you asked ten people on Washington, D.C.'s Constitution Avenue and ten people on Bismark's Main street the question "What is NAFTA going to do?" all would answer that NAFTA will eliminate tariffs and increase access to Mexican and Canadian markets. Twenty of twenty would be wrong.

In reality, NAFTA adds many new tariffs and restricts many existing markets. Corn, barley, wheat, beans, and milk and cheese product will have less access or higher tariffs, or both, for the intermediate future if NAFTA goes into effect. The chart, on page 7, drawn from the Mexican tariff schedule illustrates this point.

I'm going to show how NAFTA restricts trade with a very graphic example: dry edible beans. Beans are a mundane legume that are the brunt of many jokes (my son, age 14 knows about a thousand). But, beans are no joke in North Dakota, where we plant 440,000 acres of navy, pinto, and other varieties. These beans are worth $71 million annually. We are the number one producer of edible beans and our number one market is Mexico. Between 1989 and 1991, the U.S. average annual export volume of beans to Mexico, pursuant to CONASUPO license was 90,276 metric tons with no tariff.

When NAFTA was still a gleam in a lobbyist's eye, I was quite optimistic that NAFTA would bring expanded trade opportunities for beans. I was disappointed. NAFTA cuts our tariff free access from over 90,000 metric tons to 50,000 metric tons. Sales over that amount have a tariff of one hundred thirty nine percent, but not less than $480 a ton. That's right: 139% and $480 a ton! Using today's prices of $419 per ton, the tariff in 1994 will be $480 a metric ton. This new tariff will come down slowly over 15 years and the quota will increase by three percent a year over 15 years. In the year 2000, the ad valorem tariff will still be 93.9%, and the tariff free access will only be 61,494 metric tons - almost thirty thousand tons less than our 1989-91 average. This is "free trade?" But it gets worse.

PRESENT RESTRICTIONS	COMMODITY	TARIFF FREE QUOTA	1989-1991 AVERAGE EXPORTS	1994 TARIFF OVER QUOTA
$0.77/Kilo $7.70/MT-Import License	Wheat, including durum	0	354.258 MT	15% reduced to 0 over 10 years
$0.02/Kilo	Corn	1.5 Mil. MT	2,884,931 MT	$205/MT but not less than 215%. Reduced to 0 after 15 years
$0.23-.34/Kilo on barley	Barley	120,000 MT	188,000 MT	$155/MT but not less than 128% for barley, $212/MT but not less than 175% for malt. Reduced to 0 after 10 years
Duty free except 15% between August 10 - January 31	Soybeans	Unlimited	1,145,436 MT	Seasonal tariff reduced from 15% to 10% and the dutiable season reduced from August 1-January 31 to October 1-December 31. Tariff to be reduced over 10 years
Import Licensing System	Dry Edible Beans	50,000 MT	90,275 MT	$480/MT but not less than 139%. Reduced to 0 after 10 years
$2.24/Kilo on fresh, chilled and frozen pork	Hogs & Pork	353,000 HD 21,032 MT	124,430 HD 68,500 MT	In quota 18% to be eliminated over 10 years. Over quota 20% to be eliminated at end of year 10.
15% on live slaughter cattle 20% on fresh and chilled beef	Cattle & Beef	0	133,079 HD 41,146 MT	Tariffs to be eliminated
Import license on milk powder and cheese	Dairy	40,0000 MT of milk powder 0-cheese	41,985 average milk powder 1,893 MT/Cheese	$1,160/MT not less than 139% 20% cheese tariff to be reduced over 10 years
10% for rough and broken rice 20% for brown and milled rice	Rice	0	135,508 MT	Present tariffs to be phased out over 10 years
Licensing system	Tobacco		2,886 MT	50% tariff to be eliminated over 10 years

The next question is, what happens if Mexico has a crop failure or reduction, or its consumers want more beans than allowed by the quota (given our recent experience, this is very likely)? If Mexico wants 40,000 more metric tons of beans in 1998, will they import them from the U.S. with a 1995 tariff of 127.8%? Or from China that still operates under the old CONASUPO licensing system with no tariff? It's obvious. A smart bean processor won't be buying U.S. beans.

When I raised this problem with the Mexican Undersecretary of Agriculture, I was assured that U.S. sellers would be notified and allowed free access to the market on an equal basis with other countries if Mexico wanted more duty free beans. When I asked a representative of United States Trade Representatives (USTR) where the notice to the U.S. sellers and access to the market procedures were to be found in the Agreement, I was told that this issue would be handled by Mexico. It was a "domestic issue." NAFTA is silent on that point.

This serious omission does not leave me with a sense of confidence that our negotiators care about beans, or are worth beans.

The question of what happens if Mexico wants more than the quota amount of beans between now and 2007 is a crucial issue for our bean farmers and bean industry. This issue must be addressed in an Agreement that purports to settle all trade issues. If Mexico in fact intends to be flexible about imposition of the tariff, the Agreement <u>must</u> specify how our farmers will be notified, and when, and by whom. It <u>must</u> spell out the conditions under which tariffs will be waived, and by whom and when.

Barley is another example. NAFTA negotiators agreed to eliminate Mexican import licensing requirements on barley and malt and provide immediate duty-free access for 120,000 metric tons of barley and malt. This new quota is much less than our 1989-1991 sales of barley and malt of 188,000 metric tons. Mexico can apply a tariff of 128% on barley and 175% on malt imports above the quota. The quota will increase three percent a year, and the duty will be phased out over ten years.

Dairy is another good example of how NAFTA does not mean free trade. Canada would be an excellent market for North Dakota milk. But Canada has continued the same no-sale-whatsoever dairy policy under NAFTA as it did under the Canadian "Free" Trade Agreement. That's right. Under NAFTA we can't sell <u>any</u> milk to Canada. Moreover, the Mexican duty-free access for milk powder under NAFTA will be <u>less</u> than our present market and puts on a <u>new</u> 139% tariff on sales over than amount. A <u>new</u> 20% Mexican tariff on cheese has been added, to come down over ten years.

Another example is wheat. Mexico has imposed a <u>new</u> five percent addition to the existing ten percent tariff on durum wheat and imposed a <u>new</u> fifteen percent tariff on all other wheat, in exchange for the abandonment of the free CONASUP import license. It's indeed ironic that while Mexico raises its tariffs on U.S. wheat, the U.S. is subsidizing sales of wheat to Mexico with Export Enhancement program payments.

"Why aren't these new tariffs and restrictive quotas better known to the press and public? I would hypothesize that it is because the Mexican tariff schedule book in which this all appears is printed solely in Spanish."

Why aren't these new tariffs and restrictive quotas better known to the press and public? I would hypothesize that it is because the Mexican tariff schedule book in which this all appears is printed solely in Spanish. As a very indifferent student of Spanish at Mandan Senior High School in 1962-63, you can imagine my dismay as I started to dig into NAFTA and pulled out the volume marked "Schedule of Mexico," only to find it was all in Spanish! This makes one suspect that widespread awareness of the Schedule was not strongly sought by the negotiators.

The Second Big Myth of NAFTA rhetoric is that it is good for agriculture in the long term. Proponents argue that NAFTA's long term benefits will outweigh any short term problems. I'd like to first examine this argument from the perspective of a Commissioner of Agriculture who feels a strong sense of responsibility for the farmers <u>now</u> trying to eke out a living in my state.

My problem is that in the "long term" the farmers for whom I am fighting may no longer be here. The restrictive sales opportunities over the next 10 to 15 years may push many farmers over the edge. Many North Dakota farmers are hanging on by a thread. The farm crisis of the 80's hasn't ended for them. In the last five years, they have suffered at least four years of weather disasters. They can't afford screw-ups by themselves or others. And by "others" I mean negotiators, Senators and Congressmen. It's life or death. They want to grow crops and livestock and they want and need to <u>sell</u> their products <u>now</u>, at a fair price, not <u>be</u> sold or bargained away for long-term hypothetical advantages. But shorts-term or long-term, NAFTA's benefits to agriculture have been grossly oversold.

The chart on page 9 shows what USDA projects the annual net gains to various commodities will be <u>after</u> the tariff phaseout period is over.

COMMODITY	PROJECTED REVENUE INCREASE	PERCENTAGE OF 1991 U.S. SALES OR CASH RECEIPTS
WHEAT	$30 million after 10 years transition	.5%
CORN	$400-450 million after 15 years transition	3%
SOYBEANS	$400-500 million after 10 years transition	4%
DRY EDIBLE BEANS	$15 million after 15 years transition	3%
PORK	$150-200 million after 10 years transition	1.5%
BEEF	$200-400 million	.8%
DAIRY	$200-250 million after 15 years transition	1.4%
RICE	$10-20 million after 10 years transition	2%
TOBACCO	$90 million after 10 years transition	3%

For wheat, it is one half of one percent, for corn three percent, for soybeans four percent, for beans three percent, for beef eight tenths of one percent, for dairy one and four tenths percent, for rice two percent, and for tobacco three percent. These long-term benefits can only be characterized as trivial and conjectural.

The value of soybeans (the big "winner" with a four percent increase after ten years) fluctuated twenty-eight percent in value last year according to Chicago Board of Trade data. It is fair to say that daily market savings or daily currently fluctuations in each of these commodities exceed the projected "benefit" of NAFTA in the long-term.

Mexico is a growing market. The Foreign Agriculture Service reports that between 1986 and 1992 bulk commodity sales to Mexico rose three hundred percent, intermediate product sales rose by two hundred and fifty percent and consumer orientated food products rose by over seven hundred percent. These export increases were made before NAFTA, and are based on internal, sensible Mexican policy changes as well as better marketing efforts by U.S. companies.

The paltry, puny projected "benefits" after NAFTA are a reason to reject NAFTA, not accept it.

The Third Big Myth of NAFTA rhetoric is that the downside to free trade are just minor. Not so. Let me give just one example: cattle health.

The second largest source of farm income in North Dakota after wheat is cattle. We don't have large corporate feed lots. We don't have corporate farms. What we do have is thousands of small and medium sized cow-calf producers who produce feeder cattle that are of superb genetics and health. Mexico now exports over a million head of feeder cattle to the U.S. that competes directly with us. Right now we get a premium because of superior health, but it may not always be this way.

Tuberculosis used to be a dreaded disease in the U.S. with sanatoria throughout the country. The disease has now virtually been eradicated through immense efforts by public health professionals and farmers and ranchers. In 1918, almost 5% of U.S. cattle were positive to TB; in 1990 it was .015%. Our progress on this dread disease has stalled, due to imports of Mexican steers.

North Dakota is one of 40 states in the U.S. that have been certified tuberculous free in cattle. The status was hard to obtain and is easy to lose. If only a single infected herd is found, our tuberculous free status is suspended and if two or more are found in a 48 month period it will be revoked. Obviously, only a few head of infected cattle will be costly even to owners of healthy cattle.

USDA's veterinary service has called Mexican steers the most "formidable" issue concerning exposure potential to Bovine tuberculosis in the U.S. In the summer 1993 Animal Health Insight, APHIS reported in 1988, only

seventy TB cases were found in the U.S. but, as imports of steers from Mexico increased the number jumped to 224 cases in the first six months of 1992. Ninety-two percent of these confirmed cases were of steers from Mexico.

Because of this alarming growth, North Dakota has adapted a special rule that requires supplemental testing by U.S. veterinarians before Mexican cattle can enter North Dakota, regardless of any Mexican test. This rule would be subject to challenge under the NAFTA rules as a barrier to trade. And, if it were challenged, the North Dakota Board of Animal Health could not intervene to defend the rule, nor would independent consumer or food safety experts be allowed to intervene.

This leads me to the Fourth Big Myth of the NAFTA rhetoric: that the Agreement has safety net features to protect our economy, our health and our environment. Opponents are called "alarmist" well, I am alarmed and appalled by the dispute resolution process.

Nowhere in the text, or the footnotes or the annexes of NAFTA is there any procedure for a state to intervene to protect or explain its laws, should those laws be challenged under NAFTA. One of the public policy choices our North Dakota people have made is to ban corporate farming and this ban has been upheld at the U.S. Supreme Court. As I read NAFTA, if a Canadian or Mexican life insurance corporation wanted to invest in North Dakota farm land, our law could be challenged. And if it were challenged, the state has no means to directly defend it.

In my office we have a program called "Pride of Dakota" which promotes the sale of North Dakota made products. This program as well is subject to challenge as an "advantage" based on domestic content and we have no means to protect it. The list could go on to cover a variety of sound, progressive state laws and regulations that could be snuffed out by a secret NAFTA dispute panel.

If I, as North Dakota Commissioner of Agriculture, hold a simple penalty hearing or adopt a simple rule, I have to open that hearing to the press and public. I must provide notice and opportunity to comment, and copies of any relevant material to anyone who asks. But under the NAFTA dispute process I can't attend a hearing or obtain copies of briefs, even if it is my own regulation being challenged. NAFTA dispute resolution processes are secret.

In North Dakota, our judges are elected and in the U.S. system they are confirmed (or not) by the Senate after exhaustive investigation of character. Courts are open under state and federal constitutions. Experts who provide scientific opinions in our courts are subject to strict rules and stiff cross-examination. Under the North American Free Trade Agreement, the "judges" will be ten trade experts from each country (usually big city corporate lawyers) who will operate in secret. They don't even have to disclose the briefs they receive or the names of the "experts" they select on scientific disputes.

When I went to junior high school, they taught a class called Civics. In high school, I took Government. In college, I took numerous political science courses on federalism and other issues. In law school, I studied constitutional law and administrative and court procedures (by the way, I was a far better student in these classes than in Spanish). The NAFTA dispute resolution process doesn't match what I was taught in these classes at all.

As a lawyer and a citizen, I care deeply about process. I once sued the U.S. Government and stopped thousands of foreclosures by USDA because its foreclosure process was unconstitutional. But what USDA did then is nothing compared to the process you would authorize by adopting NAFTA.

The Fifth Big Myth of the NAFTA rhetoric is that it will result in a "level playing field." What nonsense. NAFTA is like a table with a flat top, but with legs on one side two feet high and legs on the other side six feet high. The top of the table is flat, but it sure as heck isn't level.

An important part of my job as Commission of Agriculture is to enforce pesticide laws. My office conducts over one thousand inspections annually on farmers, commercial applicators and chemical dealers. Our law is strict and we have strict enforcement to assure safe food for consumers, to protect the health of the applicator and farm workers, and to protect our soil and waters. We also run a program called "Project Safe Send" to pick up and legally destroy banned and hazardous agriculture chemicals. Last year at a cost of $450,000, we picked up forty tons of banned, hazardous of unusable pesticides, including over five thousand pounds of DDT.

If NAFTA passes, I will be in a quandary. I will continue to enforce the pesticide laws and to pick up banned chemicals. But, how do I explain to farmers that strict enforcement of our laws is essential to consumer food safety and how do I explain to the legislature that Project Safe Send should be continued when Congress will subject these farmers to competition from Mexico where DDT is legal and pesticides law enforcement is virtually nonexistent.

This issue of level playing field is a very serious point, not just for agriculture but also for labor and small businesses. The United States has adopted numerous laws governing agriculture, the environment, wages, and work conditions. Each of these carries a cost. In North Dakota, we require a minimum wage, social security deductions (especially if we want to be in the Cabinet), workers'

compensation deductions, overtime, safe working conditions, and other similar requirements - all of which I support as sound public policy.

If the state of North Dakota advertised that businesses should move to North Dakota because our average wage was one dollar an hour, including benefits, we would have an army of Department of Labor, OSHA, and Social Security enforcers jump on Northwest Airlines to fly out to North Dakota to put folks in jail. When the State of Yucatan recently proposed the same thing in advertisements in U.S. newspapers, our enforcement agencies sit by and some policy makers applaud "economic development" for Mexico.

The Sixth Big Myth of NAFTA rhetoric is that opponents don't take a balanced view.

I have been accused of being "unbalanced" about NAFTA. Not so. I have evaluated the positives, as well as the negatives. I see positives for processed food products (like pasta) and food ingredients; I see positives for sunflowers and other oilseeds, I see positives for purebred cattle and hogs. I'm the President of the Mid-American Agri-Trade Council, composed of twelve midwestern states, and I'm working hard to expand sales of high value food products and cattle to Mexico, as well as Canada. Yet, when I balance these positives with the negatives I am convinced that on balance this version of NAFTA should be rejected.

I urge this Committee to treat this version of NAFTA as a first draft. We can strike a better balance. It avails a farmer little if his sunflowers increase marginally in value, while his wheat, barley, beans and sugar crop lose value and his cattle become tubercular. It avails a farmer little if her husband's off-farm job moves to Mexico in search of one dollar an hour wages. It avails a farmer little if he can't even deliver the purebred bull he sells to Mexico in his own truck, because it has to change to a Mexican vehicle and driver at the border. It avails a farmer little if her property taxes go up because the Red River Valley's one billion dollar sugar industry goes down. It avails a farmer little if consumers in America lose confidence in the food supply.

No - I think I'm pretty balanced about this version of NAFTA.

A few days ago, I was having a disagreement about NAFTA with a fellow midwestern agriculture commissioner who favors NAFTA. The conversation came to an abrupt halt when I said, "I've read it, and I don't like it. You like it, have you read it?"

To conclude, based on what I've read and researched, I urge you to reject this version of NAFTA. On the positive side, I urge you to work closely with the Mexican government to expand trade and to equalize food safety, environmental and worker protection rules. I urge you to commence negotiations with Mexico to enter into better trade agreement that "Puts People First."

Proponents of NAFTA argue that if we reject this version, the boat will leave the dock. I say that this version of NAFTA is the Titanic - let it go! We can get to our destination of expanded trade opportunities and a better life for the people of Mexico, Canada and the United States faster and in better shape on a different, better boat.

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US-MEXICO TRADE:
PULLING TOGETHER OR
PULLING APART?
CONGRESS OF THE UNITED STATES

a heavily protected, highly regulated one. The first major step took place when Mexico joined the General Agreement on Tariffs and Trade (GATT) in 1986, and began lowering the barriers that had protected its industries for more than 50 years. Now it seeks further industrialization by exposing Mexican firms to the spur of foreign competition and encouraging foreign direct investment (FDI) and transfers of technology that will help create new jobs for a rapidly growing workforce (more than half the population is under 20 years of age—see ch. 6).

Many in the United States worry that more U.S.-based firms will move to Mexico to take advantage of wages and benefits that average roughly one-seventh of U.S. levels and that the shift of investment to Mexico would be at the expense of U.S. workers. After all, when Mexican wages dropped by nearly two and a half times relative to U.S. wages during the economic crisis of the 1980s, production in border *maquiladoras* shot upward. In this view, "footloose plants" might also move to Mexico to escape stricter U.S. enforcement of pollution and workplace health and safety standards.

Others in the United States see foreign investment and movement of lower skilled jobs to Mexico as complementing a U.S. economy focused on high-wage, high-skill jobs. In this view, FDI would also generate the wealth Mexico needs to enforce tighter environmental and workplace standards and to provide a growing market for U.S. goods.

OTA's analysis indicates that whether a NAFTA works for or against either country will depend on how integration is managed. Managed well, with adoption of new labor and industrial policies to help the United States adapt to a unified continental market, economic integration could enable U.S. workers to enjoy 1 or 2 percent increases in living standards over the next 15 years. Mexico could grow at the 5 to 10 percent annual pace of developing Asian nations such as Thailand.

Managed poorly, less educated workers in the United States could expect to continue losing about 1 percent of their real wages annually while, after 15 years, Mexican workers would barely recover the ground they lost in the 1980s.

So far, economic integration between the United States and Mexico has not been managed well. NAFTA presents an opportunity to begin managing it better. This report focuses on how to take advantage of that opportunity. In doing so, OTA draws on considerable past analysis of international economic competition and the implications for U.S. workers, including: *Technology and Structural Unemployment: Reemploying Displaced Adults (1986); Making Things Better: Competing in Manufacturing (1990); Worker Training: Competing in the New International Economy (1990); Competing Economies: America, Europe and the Pacific Rim (1991);* and *After the Cold War: Living with Lower Defense Spending* (1992).

PRINCIPAL FINDINGS

The United States and Mexico are negotiating a free trade agreement at a time when workers in the United States, particularly the roughly 50 percent of the labor force that has no more than a high school education, have suffered significant declines in living standards. With or without a NAFTA, further absolute and relative declines in living standards—particularly for those in once high-wage manufacturing industries—are likely over the next 15 years. It will take a concerted national effort, with cooperation among business, labor, and government, to help the less affluent half of the U.S. workforce enjoy even modest improvements in wages and economic security.

Short-Term Impacts

1. Over the next five years, a NAFTA is not likely to have large impacts on job opportunities for U.S. workers, primarily because Mexico, not the United States, has the more protected economy. As a result, reductions in tariff and non-tariff barriers are more likely to boost U.S. exports to Mexico than Mexican exports to the United States.
2. Because Mexico has not made a sustained effort to upgrade its technology base and the education and skills of its workforce, products manufactured by Mexico's domestic industry are not likely to compete with sophisticated U.S. manufactured goods. However, production by U.S. and other foreign investors in Mexico, who have the technology and resources to improve the efficiency of the Mexican workforce, could threaten U.S. workers making more sophisticated products, such as auto engines.
3. Although Mexico has a comprehensive set of legal protections for workers that some-

times exceed those in U.S. law, the exercise of government authority to interpret and enforce those protections seriously compromises workers' rights to form unions, to bargain, and to strike. The Mexican government used these powers to reduce real wages by 40 percent in the 1980s and to keep wage increases modest as the Mexican economy recovered in the early 1990s. Health and safety standards in Mexico are also poorly enforced, especially in smaller enterprises. As a result, while trade with Mexico is not responsible for the current predicament of U.S. workers or the weakness of the U.S. system of labor protection, accelerating economic linkages with Mexico could reinforce downward pressure on U.S. wages and labor standards. Despite this potential, the U.S.-Mexico Memorandum of Understanding on labor issues, a response to congressional pressure, has led only to limited information exchange between the U.S. Department of Labor and its counterpart agency in Mexico. Discussions have skirted core worker rights issues in each country.

4. The impacts of a NAFTA on U.S. workers will vary by and within industry sectors. These impacts will include direct job losses and job creation, as well as downward pressure on wages and benefits for some workers who retain their jobs. Workers in apparel, auto parts, and TV assembly are already suffering job losses due to movement of production to Mexico; NAFTA may reinforce this tendency. Regardless of whether the net effect on U.S. jobs is positive or negative, the workers most likely to be dislocated (e.g., workers producing standardized commodities such as blue jeans) lack the skills for jobs that may be created (e.g., machinists and technicians in U.S. firms producing capital goods for Mexican factories). Box 1-A illustrates the difficulties faced by workers already laid off due to trade with Mexico.

Box 1-A—What Happens to U.S. Workers Whose Jobs Move to Mexico?

Since 1983, Pillsbury Green Giant has reduced its workforce in Watsonville, California, by about 1,000 workers. These food processing workers, predominantly Hispanic women, have lost unionized jobs paying $7.50 to $12 per hour. The work has been moved to Gigante Verde in Irapuato, Mexico, where costs for the highly labor-intensive initial processing of broccoli and cauliflower are much lower. In January 1990, the company announced plans to move all cauliflower and broccoli processing (including harvesting, trimming, blanching, and freezing, but excluding final packaging) to Irapuato. Final packaging, a highly automated process, continues to be done in the United States, at Watsonville and at plants in Ohio and Illinois. Watsonville also continues to do some of the initial processing of California-grown vegetables.

Since 1990, the Watsonville workforce has shrunk from 550 workers to 170. A joint union-management-government outplacement and retraining program, established with Federal funds through the EDWAA (Economic Dislocation and Worker Adjustment Assistance) program, provided some help. Santa Cruz County's EDWAA office offered on-site job counseling, retraining, and placement services at the plant. However, the EDWAA grant lasted only 18 months, expiring on July 1, 1992. Retraining focused on English language skills. As funds ran out, many of the workers had been able to improve their English, but not their "marketable skills."

Immigration

5. Legal and illegal migration from Mexico to the United States will remain high. In the short run, a NAFTA promises to reduce employment in Mexico's agricultural and small-firm sectors and thereby increase emigration to the United States.

Environment

6. Although Mexico has comprehensive environmental laws not unlike those of the United States, enforcement has been lax. Mexico has few inspectors and budgets little for pollution control, cleanup, and inspection. Public pressure for environmental improvement is only now beginning to appear.

7. The jointly prepared *Integrated Environmental Plan for the Mexican-U.S. Border Area* is only a small step toward improving the border environment. Many of the *Plan's* "action items" call for information exchange and more studies, rather than investments in needed cleanup and control. The *Plan* lacks concrete goals and the financial commitments needed

Table 3-7—Profile of Mexico's *Maquiladora* Sector, 1990

Products	Number of plants	Number of employees
Electronic and electrical equipment and components	501	161,000
Auto parts, transportation equipment	158	100,000
Apparel	289	42,000
Furniture	265	25,000
All other	707	118,000
	1,920	446,000

SOURCE: "The Maquiladoras: Present Status, Future Potential," report prepared for OTA under contract No H3-7040 by Leslie Sklair, December 1991, table 3, p 57 (based on date compiled by the Mexican Government).

printed graphics) and delivery standards.[8] The steel, insulation, piping, and furnishings in factory buildings—along with the production equipment—comes from abroad.

When the *maquiladoras* began growing rapidly, they drew on a rural labor force, in part comprised of migrants from southern Mexico, with little or no experience of industrial discipline.[9] Even in the mid-1980s, the average *maquiladora* employee had only 3 years of basic education. With further growth, rising wages, and a slow increase in the number of technical jobs, *maquiladoras* have drawn labor from a wider region and levels of education have increased to about the national average of 6-plus years. The proportion of white- and grey-collar workers (e.g., administrators, technicians, quality-control inspectors) in the *maquiladora* sector has increased from about 14 percent in the 1970s to 18 percent today—far lower percentages than common in U.S. industry. High turnover stems from low wages, poor working conditions, and the ease with which workers can get an equivalent job in another *maquila* or cross the border into the the United States. Generally speaking, *maquila* owners and managers prefer to live with turnover rates that may exceed 20 percent per month rather than move away from the border, with its easy access to the United States.[10]

Maquila-like production will not solve Mexico's employment problems. Despite the labor intensive nature of their operations, *maquiladoras* created only about half a million new jobs during the 1980s, a period in which Mexico's labor force grew by a million people each year.

Agriculture

About 26 percent of Mexico's labor force remains in agriculture. Considering that agricultural output has fallen from 14 percent of GDP in 1965 to about 9 percent today, this high percentage indicates the low productivity of Mexican agriculture.[11] A longstanding policy of granting usage rights to small plots of land called *ejidos*, to which the state retained ownership, has helped preserve a fragmented and inefficient system. Through trade protection and price supports, the government sought to keep *ejidatarios*, small farmers, and agricultural laborers on the land. At least 2 million peasant farmers continue to grow corn and beans—staple foods before the Spanish arrived. More than two-thirds cannot produce enough for their own families.[12] Today, Mexico cannot feed itself; food imports tripled during the 1980s.

The changes to the *ejido* system will remove one of the government's principal sources of social control; the promise of expanded *ejido* lands (e.g., through expropriation of large private holdings) has for many years served to dampen unrest among the rural poor. By withdrawing its longstanding promise of land, the government will satisfy those who gain title to their *ejidos*, while leaving those still waiting—perhaps 2 1/2 million—with few prospects except to

[8] The primary exceptions are the petrochemical and food processing (or *agro-maquila*) sectors, both of which source more of their inputs in Mexico. See Jaime Zablodovsky, "Trade Liberalization and Macroeconomic Adjustment," *Mexico's Search for a New Development Strategy*, Dwight S. Brothers and Adele E. Wick, eds. (Boulder, CO: Westview, 1990), table 3, p. 196.

[9] This paragraph draws on Jorge Carillo, "*Mercados de Trabajo en la Industria Maquiladora de Exportación*" [Labor Markets in the Assembly Plant Exporting Industry], unpublished report, *El Colegio de la Frontera Norte*, Tijuana, 1991.

[10] A recent survey found little indication of plans to move to the interior in the event of a NAFTA. Jan Gilbreath Rich and David Hurlbut, *Free Trade With Mexico: What's In It For Texas?*, U.S.-Mexico Policy Report No. 1 (Austin, TX: University of Texas, Lyndon B. Johnson School of Public Affairs, 1992), pp. 40, 41. For exceptions to this pattern, see ch. 9 on apparel.

[11] *World Development Report 1992*, op. cit., footnote 1, p. 223; *Foreign Agriculture 1990-91* (Washington, DC: Department of Agriculture, Foreign Agricultural Service, August 1991), p. 82.

[12] Santiago Levy and Sweder van Wijnbergen, "Transition Problems in Economic Reform: Agriculture in the Mexico-US Free Trade Agreement," *Economy-Wide Modeling of the Economic Implications of a FTA with Mexico and a NAFTA with Canada and Mexico*, Addendum to the Report on Investigation No. 332-317 Under Section 332 of the Tariff Act of 1930, USITC Publication 2508 (Washington, DC: U.S. International Trade Commission, May 1992), pp. 299-357.

Table 3-8—Mexico's Federal Spending on Education and Health

Share of all central government spending (percent)		
Year	Education	Health
1982	13.2%	1.3%
1983	10.9	1.2
1984	12.3	1.5
1985	11.5	1.4
1986	9.1	1.3
1987	8.3	1.2
1988	9.0	1.3
1989	11.7	1.5
1990	13.9	1.9

SOURCE: *Government and Financial Statistics Yearbook 1991* (Washington, DC: International Monetary Fund, 1992), Mexico table 3.

work as agricultural laborers or move to urban areas in search of other work.[13]

CRISIS AND AFTERMATH

Mexico's new middle class had a hard time during the 1980s, as did almost all Mexicans except the wealthy who could send capital abroad to protect against inflation.[14] The "crisis" began in 1981, when the price of oil—then Mexico's largest export—began to fall and interest rates on Mexico's foreign borrowings to rise. The price of Mexican crude had doubled between 1979 and 1981, when a barrel brought as much as $37. Projecting future prices as high as $50 a barrel for state-owned oil, the government increased spending levels faster than revenues, borrowing billions of dollars from foreign lenders.

Oil revenues began to slide, gradually at first, as the government's budget deficit rose. In 2 years, external debt more than doubled, from $40 billion in 1980 to $91 billion in 1982.[15] As the 1980s progressed, public sector spending dropped, squeezing social programs, including education and health, while the government steered scarce funds to managing the debt crisis (table 3-8). When then-President Lopez Portillo nationalized the banks, the progressive deterioration in relations between government and business reached a breaking point. Mexico's balance of payments went deeply negative. The peso fell from its 1981 value of about 25 to the dollar, passing through 250 to the dollar in 1985 on the way to 3,100 to the dollar at the beginning of 1992. Unemployment and underemployment rose, while wages and living standards dropped. Mexico's stock market crashed in 1987, like many others, increasing the already high rate of bankruptcies, particularly among smaller firms.

Following an agreement with the International Monetary Fund in 1986, Mexico embarked on a stabilization program. The 1987 Economic Solidarity Pact (*Pacto de Solidaridad Económica*) and its successors provided for predictable devaluation of the peso. As the policies of austerity and opening (*apertura*) brought inflation rates down (to 17 percent in 1991), economic growth gradually resumed and capital began flowing back into the country. After 1989, commercial lenders forgave a small portion of Mexico's debt and extended new loans under a plan developed by U.S. Secretary of the Treasury Nicholas Brady. Other exports began taking the place of oil, which accounted for about 70 percent of Mexico's total exports in 1982, but only 30 percent in 1988.

Entering office in 1988, President Carlos Salinas de Gortari accelerated Mexico's opening to trade and investment, which had begun with accession to the General Agreement on Tariffs and Trade—a step that required an end to ISI policies. The PRI (box 3-D) had nearly lost the 1988 elections, despite its well-honed ability to "manage" the electoral process; Salinas knew that without economic recovery his party's control could end. In August 1990, he formally requested talks with the United States on a free trade agreement, hoping to encourage investment by foreign firms and create new jobs for a rapidly growing labor force.

A cautious fiscal and monetary policy and reductions in trade barriers leading to increased import competition reinforced the wage and price controls under the *Pacto* to contain inflation. Real wage declines slowed, and then wages began to rise, although unemployment remains in the range of 18 to 20 percent or higher and as much as half of the

[13] The 2 1/2 million figure is from Tim Golden, "The Dream of Land Dies Hard in Mexico," *New York Times*, Nov. 27, 1991, pp. A1, A10.

[14] More than $11 billion left the country in 1981, and perhaps $40 billion during the period 1980-84. Estimates for the decade as a whole range up to $80 billion. For a comparison of five estimates of capital flight, see Rodiger Dornbusch, "Mexican Debt," *Mexico's Search for a New Development Strategy*, Dwight S. Brothers and Adele E. Wick, eds. (Boulder, CO: Westview, 1990), table 11, p. 165.

[15] Ibid., pp. 141-169. Most of Mexico's external debt was owed by the government, and mostly to foreign commercial banks. The government suspended payments on its foreign debt in August 1982.

Box 3-D—Organized Labor and the PRI[1]

Mexico has been a one-party state since 1929, in part because of votes assured through the longstanding alliance between the PRI-affiliated (or "official") labor movement and the national political leadership. The post-revolutionary Mexican social pact provided the unions incorporated into the PRI with preferential treatment in union registration proceedings and a share of the PRI's elected offices. Union members received government-subsidized housing, health care, and basic foodstuffs. When opposition elements threatened PRI-affiliated unions, several Mexican presidents have employed force against them. For the government, the official unions provided a base of mass electoral support. In periods of economic instability, such as the 1980s, the labor leadership's capacity to contain rank-and-file wage demands and control worker opposition helped the government manage the macroeconomy and reduce inflation.

Since the 1930s, the PRI-affiliated labor movement has been dominated by the *Confederación Trabajadores de Mexico* (CTM), formed in 1936 by socialist Vicente Lombardo Toledano. The CTM drifted to the right when President Avila Camacho replaced Toledano with the more conservative Fidel Velasquez. Velasquez, now 92, remains the head of the CTM and the most powerful labor figure in Mexico. On various occasions since Velasquez came to power, radical or independent elements of the Mexican labor movement have challenged CTM dominance and advocated pressure on the PRI for policies more favorable to workers. On each of these occasions, divisions among dissident unionists, the use of state power to weaken opposition, and overtures to moderate elements in opposition coalitions served to re-establish the dominance of the pragmatic mainstream of the Mexican labor movement.

[1] This box draws from Kevin J. Middlebrook, "State-Labor Relations in Mexico: The Changing Economic and Political Context," Unions and the State in Mexico, Kevin J. Middlebrook, ed. (La Jolla, CA: University of California-San Diego, Center for U.S.-Mexican Studies, 1991).

workforce may be underemployed.[16] Lacking unemployment insurance, and with such high levels of unemployment and underemployment, it is possible that half of Mexico's labor force lives below the official poverty line.

MEXICO'S ALTERNATIVE FUTURES

Politics and Policy

President Salinas, who cannot succeed himself, has until 1994 to lock in the new economic policies he helped put in place as planning and budget minister in the preceding administration.[17] If his policies are seen as failing, the government and the PRI risk political backlash. Although Salinas will probably pick his own successor—just as he was chosen in 1986 by then-President de la Madrid—a NAFTA would help solidify his reforms, making it harder to return to past policies and practices.

Mexico is trying not only to open and modernize its economy, but also to define a new set of accomodations among government, business, and labor. The 30-year understanding between government and business, which broke down with the crisis, called for the private sector to stay out of party politics in return for trade protection, subsidies, and, in effect, guaranteed high profits. Under the 1987 *Pacto*, business interests acquiesced in the continued opening of the economy, while labor settled for wage increases that initially lagged behind inflation. For its part, the government promised to contain spending, raise controlled price levels for products including gasoline, electrical power, and fertilizer, and reduce the size of a state-owned sector that had

[16] The official unemployment figures are much lower, but do not include rural areas or discouraged job-seekers, while counting anyone who works an hour or more per week among the employed. Also see Michael J.D. Hopkins, "Employment Forecasting and the Employment Problem: Conclusion," *Employment Forecasting: The Employment Problem in Industrialized Countries*, M.J.D. Hopkins, ed. (London: Pinter, 1988), pp. 210-247; and Trejo Reyes, "Mexican-American Employment Relations: The Mexican Context," op. cit., footnote 3.

[17] That is probably enough time. The experiences of a wide range of developing countries suggest that after 5 or 6 years liberalized trade and industrial policies are unlikely to be reversed. Michael Michaely, Demetris Papageorgiou, and Armeane M. Choksi, *Liberalizing Foreign Trade, Volume 7: Lessons of Experience in the Developing World*, Demetris Papageorgiou, Michael Michaely, and Armeane M. Choksi, eds. (Cambridge, MA: Basil Blackwell, 1991), p. 33.

Chapter 6

The Border: A Boundary, Not A Barrier

SUMMARY

This chapter deals with immigration from Mexico to the United States and environmental problems along the border. The boundary between the United States and Mexico stretches for 2,000 miles; at most points, people can cross almost as easily as polluted air. It will be easier to improve the environment than to slow immigration; short of establishing a police state along the border, there is no way the United States can stop the flow of migrants. Only socioeconomic development in Mexico that reaches into the lowest classes will slow that flow appreciably.

For many years, large numbers of Mexican workers have been coming to the United States, legally or illegally, in search of higher wages and a better life. If economic growth in Mexico leads to meaningful gains in wages and living standards, some of the pressure to emigrate will abate. But Mexico's income distribution is heavily skewed toward the wealthier classes. Should the benefits of a North American Free Trade Agreement (NAFTA) go to those who are already well off, there might be little if any slowing of emigration. Moreover, a NAFTA could lead to increased emigration in the short-term by creating rising expectations in Mexico that could not be quickly satisfied—or simply by creating new jobs near the border to serve as jumping-off points for migrants.

Improvements in wages and living standards promise to take decades rather than years, given Mexico's rapidly growing population and already high levels of unemployment and underemployment. The Mexican economy would have to grow at rates in the vicinity of 10 percent annually to create enough well-paying jobs to keep people content at home. This is substantially faster than the country was able to achieve even in the relatively prosperous 1950s and 1960s. The United States has little choice but to prepare to absorb and put to work continuing inflows of Mexican immigrants. When people have moved to the United States and want to work, it makes sense to maximize their productive contributions to the U.S. economy.

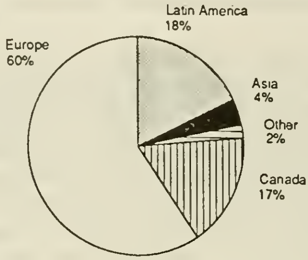
Serious environmental problems exist on both sides of the U.S.-Mexican border. Although the United States is far from blameless, most pollution sources lie in Mexico. Mexican cities, for example, dump some 20 million gallons of raw sewage each day into the Rio Grande—a river the two countries share. Similarly, much of El Paso's polluted air comes from Ciudad Juarez. Because Mexico is poor and the United States is rich, because pollution sources in the 250,000 square mile Border Area affect residents in both countries, and because Mexico's pollution problems are worse in other parts of the country, it seems likely that over the next several decades the United States will have to bear a majority of the border clean-up costs.

Mexico has announced an ambitious program to deal with environmental degradation, both along the border and in its large interior cities. Generally speaking, the country has relatively strict standards on the books (although officials are still writing regulations to implement a comprehensive environmental protection law passed in 1988). As in so many cases in Mexico, the salient questions concern enforcement and financing, rather than the letter of laws and regulations. Today, the country lacks capabilities for enforcement: the government employs fewer than 200 environmental inspectors, and budgets less than 1 percent as much for its environmental agency as does the United States. Public pressure for environmental protection and improvement is just beginning to build.

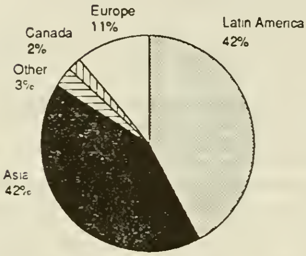
Stricter controls and enforcement will almost certainly accompany industrial development in Mexico. Countries that can afford to protect their environments and their populations generally do so; there is no reason to expect Mexico to be an exception. If the country was something of a haven for polluters in the past, that will change. But even the United States, which spends a great deal of money on environmental protection, and which has many years experience, has failed to do a very good job of setting priorities and managing cleanup. Still, there is much the United States could do to help Mexico with technical assistance and money, particularly where pollution spills across the border.

Because Mexico is only beginning to attack its environmental problems, and lacks technical expertise, in many cases there is not even baseline

Figure 6-1—Country Sources of U.S. Immigrants



1941 - 1950



1981 - 1989

NOTE: Totals may not sum to 100 percent due to rounding

SOURCE: *Statistical Yearbook of the Immigration and Naturalization Service* (Washington, DC: U.S. Immigration and Naturalization Service, 1990), pp. 3-4

information on the severity of existing pollution problems and pollution sources. By providing technical and financial assistance, the United States can help ensure that a NAFTA will serve to raise, not inadvertently lower, Mexico's levels of environmental protection. The greatest need is for a steady, predictable stream of funds for control and cleanup in the border region, so that planners will not be hostage to the vagaries of the budgetary processes in the two countries. The greatest danger is that government bodies in both countries might turn away from their commitments to improving the border environment once a NAFTA were implemented.

Table 6-1—Foreign-Born U.S. Residents by Major Sending Country

	Number of U.S. residents[a] (thousands of people and percentage of all foreign-born residents)			
	1980		1990	
Mexico	2,199	15.6 %	4,447	20.6 %
Germany	849	6.0 %	1,163	5.4 %
Philippines	501	3.6 %	998	4.6 %
Canada	843	6.0 %	870	4.0 %
United Kingdom	669	4.8 %	765	3.5 %
Cuba	608	4.3 %	751	3.5 %
Korea	290	2.1 %	663	3.1 %
Italy	832	5.9 %	640	3.0 %
Vietnam	231	1.6 %	556	2.6 %
China	286	2.0 %	543	2.5 %
Total[b]	14,080	100 %	21,632	100 %

[a]The 10 countries listed comprised the 10 largest senders as determined by both the 1980 and 1990 censuses. The census does not ask whether immigrants have legal status, but appears to count one-half to two-thirds of undocumented resident aliens (see Jeffrey S. Passel, "Undocumented Migration," *Annals of the American Academy of Political and Social Science*, vol. 487, 1986, p. 187).

[b]Total represents *all* foreign-born U.S. residents.

SOURCE: 1980 and 1990 U.S. Census Special Tabulations.

IMMIGRATION[1]

The United States, a nation of immigrants, continues to admit more migrants than any other country. In earlier years, most came from Europe (figure 6-1). Today, they come predominately from Latin America and Asia, most of all from Mexico (table 6-1). Many enter illegally (table 6-2).

Immigrants may fill jobs that would otherwise go to native-born citizens; on the other hand, they may accept work that natives refuse, such as some kinds of agricultural labor, or provision of household services. Whether or not Mexican immigrants compete for jobs with native-born citizens, immigrants

Table 6-2—Legal and Illegal Immigrants

	New immigrants (from all countries) (millions)		Immigrants as percentage of labor force at beginning of decade
Decade	Legal	Illegal[a]	
1970s	4.5	1.3	6.7%
1980s	5.9	2.5	7.3%

[a]Estimated.

SOURCE: John M. Abowd and Richard B. Freeman, "Introduction and Summary," *Immigration, Trade, and the Labor Market*, John M. Abowd and Richard B. Freeman, eds. (Chicago and London: University of Chicago Press, 1991), table 1, p. 5.

[1] This section draws heavily on "Trends in Mexican Migration and Economic Development," report prepared for OTA under contract No. H3-7140 by Susan Christopherson and Marie R. Jones, December 1991. Information not otherwise cited comes from this report.

who work contribute directly to the U.S. economy through their labor. They also pay taxes, while absorbing social services—health care, welfare payments, public schools, and so on.[2] Although immigrants with high levels of education, skill, and experience tend to raise overall U.S. human capital levels, most of those entering from Mexico have low levels of education.

Immigrants From Mexico: Legal and Illegal

U.S. laws limit entry by people wishing to live and work here through a complicated system of numerical quotas based on national origin, family relationships, and occupational skills. The Immigration and Naturalization Service registered about 600,000 new residents during each of the first 8 years of the 1980s.[3] The level rose to about 1 million in 1989 and 1.5 million in 1990 as a result of the amnesty provisions of the Immigration Reform and Control Act (IRCA) of 1986, which permitted many undocumented immigrants to qualify for permanent residency (box 6-A). With the amnesty in effect, Mexican immigrants grew from around 10 percent of newly registered immigrants to 37 percent in 1989 and 44 percent in 1990 (table 6-3).

Estimates of undocumented immigration are by nature far less reliable, but the total number of illegal residents is thought to be in the range of 2 to 3 million, increasing at about 200,000 annually. Mexicans make up an estimated two-thirds to three-fourths of the undocumented population, with many of the others from elsewhere in Latin America.[4] As discussed below, there is little evidence that IRCA has reduced illegal entries.

While the stereotypic undocumented Mexican is male, the proportion of single women has increased in recent years, and U.S. Government estimates indicate that women comprise about half the undocumented population. Moreover, IRCA has made it easier for men who entered in earlier years to bring their families here.

Photo credit. Roberto Cordoba for the New York Times

In the Tijuana River levee preparing to climb the metal barricade under the lights; hundreds cross this barrier into the United States every night.

As indicated by table 6-4, most legal entrants from Mexico settle in California, with Texas a distant second. Moreover, most reside in a few large metropolitan areas, especially Los Angeles. Undocumented workers tend to stay closer to the border; indeed, some commute to work in the United States daily from homes in Mexico. More than half a million undocumented aliens may be sojourners who live and work in the United States for a time, save money, then return to Mexico.[5]

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[2] Most estimates suggest the net of payments to and claims on government by immigrants is small. Undocumented aliens in Texas, for example, were found to contribute a net surplus to the State treasury, while six city governments, which bore the burdens of health care and educational costs, showed net drains on revenues. Since the State surplus exceeded the deficits incurred by local governments, the overall impact was positive. Sidney Weintraub, "Illegal Immigrants in Texas: Impact on Social Services and Related Considerations," *International Migration Review*, vol. 18, 1984, pp. 733-747. Other studies have found a net loss. See R. W. Gardner and L. F. Bouvier, "The United States," *Handbook on International Migration*, W. J. Serow et al., eds. (New York, NY: Greenwood Press, 1990), p. 356.

[3] *Statistical Yearbook of the Immigration and Naturalization Service, 1990* (Washington, DC: U.S. Immigration and Naturalization Service, 1991), p. 52.

[4] K.A. Woodrow and J.S. Passel, "Post IRCA Undocumented Immigration to the United States: An Assessment Based on the June 1988 CPS," *Undocumented Migration to the United States: IRCA and the Experience of the 1980s*, F.D. Bean, B. Edmonston, and J.S. Passel, eds. (Washington, DC: Urban Institute Press, 1990), pp. 33-76. Also D.G. Papedemetriou, "South-North Migration in the Western Hemisphere and U.S. Responses," paper prepared for the Ninth Seminar on Migration of the International Organization for Migration (IOM), Geneva, Dec. 4-6, 1990, p. 11.

[5] See Jeffrey S. Passel, "Undocumented Migration," *Annals of the American Academy of Political and Social Science*, vol. 487, 1986, pp. 181-200.

Table 6-3—Legal Immigrants From Top Five Countries

1985			1989			1990		
	Number (thousands)	Percent of total		Number (thousands)	Percent of total		Number (thousands)	Percent of total
Mexico	61	11%	Mexico	405	37%	Mexico	679	44%
Philippines	48	8%	El Salvador	58	5%	El Salvador	80	5%
South Korea	35	6%	Philippines	57	5%	Philippines	64	4%
Vietnam	32	6%	Vietnam	38	3%	Vietnam	49	3%
India	26	5%	South Korea	34	3%	Dominican Republic	42	3%
Total[a]	570	100%	Total[a]	1,090	100%	Total[a]	1,536	100%

[a]Totals represent *all* legal immigrants.

SOURCE: *Statistical Yearbook of the Immigration and Naturalization Service, 1990* (Washington, DC: U.S. Immigration and Naturalization Service, 1991), pp. 52-53.

Competition for Jobs

Mexicans with schooling and skills have little incentive to emigrate because wage structures in Mexico reward skilled and professional workers disproportionately.[6] It is mostly the less skilled who tend to migrate. Three-quarters of Mexican immigrants have less than a high school education, compared to one-quarter of native-born U.S. citizens; only 2 percent of Mexican immigrants have completed college. Although the differences are slight, undocumented aliens tend to be younger than legal immigrants, less literate in Spanish, and less likely to speak or read English.

Direct competition for jobs with native-born workers takes place primarily in the local labor markets of cities with large immigrant populations. Within these areas, competition centers on low-skilled jobs, as suggested by table 6-5.[7] Native-born men appear to be competing with Mexican immi-

Table 6-4—Intended Residence of Legal Immigrants From Mexico Entering In 1990

	Number (thousands)	Percent of all legal Mexican immigrants
Total	679	100%
Top five States	626	92
California	420	62
Texas	131	19
Illinois	47	7
Arizona	18	3
New Mexico	8	1
Top five metropolitan areas	426	63
Greater Los Angeles[a]	303	45
Chicago	42	6
Houston	35	5
San Diego	26	4
Dallas	19	3

[a]Including Los Angeles/Long Beach, Anaheim/Santa Ana, and Riverside/San Bernadino.

SOURCE: *Statistical Yearbook of the Immigration and Naturalization Service, 1990* (Washington, DC: U.S. Immigration and Naturalization Service, 1991), pp. 79, 83.

[6] George J. Borjas, "The Economic Consequences of Migration," paper presented at Annual Meeting of the American Association for the Advancement of Science, Chicago, Feb. 7, 1992. In countries like Sweden, with relatively flat income distributions, it is skilled workers that have the greatest motivation to migrate.

Incentives to migrate from Mexico to the United States depend not only on income but on income relative to others in a local area. See Oded Stark and J. Edward Taylor, *Demography*, vol. 26, 1989, pp. 1-14. While immigrants are responding to the wage differential between the two countries, most migrants do not come from the poorest regions in Mexico, and most have jobs in Mexico before they emigrate.

[7] Indirect effects can also be significant. For instance, fewer native-born citizens may migrate to Los Angeles if they conclude that immigrants have depressed the job market there. Migration within Mexico can also affect U.S. jobs. For example, migration from Mexico's interior to *maquila* plants on the border can cut into U.S. jobs and job opportunities directly, as well as provide a stepping stone on a journey whose final destination is Los Angeles or Houston.

Labor force participation rates are higher for undocumented aliens than for either legal immigrants or natives. They are especially high for illegal immigrant women, 64 percent of whom work outside the home. Leo Chavez, "Settlers and Sojourners: The Case of Mexicans in the United States," *Human Organization*, vol. 47, 1988, pp. 5-108.

Occupational distributions appear to be similar for legal and illegal immigrants. More than a third of undocumented Mexican males and some 40 percent of undocumented Mexican females work in manufacturing (but only 10 percent of native-born women), while agriculture and mining together employ only about 15 percent of male and 10 percent of female undocumented immigrants. Increasing numbers of undocumented Mexican workers, both men and women, have also found work in personal services and in restaurants. See Passel, "Undocumented Immigration," op. cit., footnote 5.

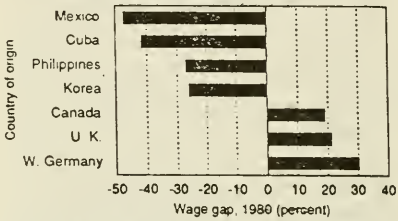
Many U.S. farmers, especially those growing fruits and vegetables, claim they depend heavily on undocumented workers to fill jobs no one else will take. "Agricultural Issues in U.S.-Mexico Economic Integration," report prepared for OTA under contract No. 13-0310 by B. Kris Schulthies and Gary W. Williams, April 1992.

Table 6-5—Occupational Profiles for Mexican-Born and Native Workers

	Mexican-born workers					Native workers		
		1988			Percent change,	1988		
	1980, All	Men	Women	All	1980-88 (All)	Men	Women	All
Operators, fabricators, and laborers	44%	35.1%	37.3%	35.8%	-19%	21.7%	8.7%	16.8%
Service workers	18	15.6	25.0	18.5	5	9.5	18.3	13.5
Precision production, craft, and repair	15	22.5	6.4	17.5	19	20.0	2.3	11.9
Farming, forestry, fisheries	13	17.6	8.2	14.7	11	5.1	1.3	3.4
Technicians, sales, and administrative support	7	4.7	17.3	8.6	17	19.1	44.8	30.8
Managers and professionals	3	4.5	5.9	4.9	63	24.5	24.6	24.6

SOURCES. Mexican-Born Workers, 1980 - *Census of the Population, 1980* (Washington, DC: Bureau of the Census, 1980, table 255(b); 1988 -*Special Studies Series*, p-23, No. 17 (Washington, DC: Bureau of the Census, 1988). Native Workers, "Current Population Survey," unpublished tables, Bureau of the Census, Washington, DC, June 1988.

Figure 6-2—Wage Differentials Between Immigrants and Native-Born U.S. Workers



SOURCE: George J. Borjas, *Friends or Strangers: The Impact of Immigrants on the U.S Economy* (New York, NY Basic Books, 1990), p. 232.

grants for manufacturing jobs. The picture is somewhat different for women. Mexican-born women tend to find work in sectors where overall employment is declining, including personal services and nondurable goods industries such as apparel. Because many native-born women have moved into sales and administrative or "super-clerical" positions in service industries, competition between Mexican-born and native-born women for jobs may be diminishing.

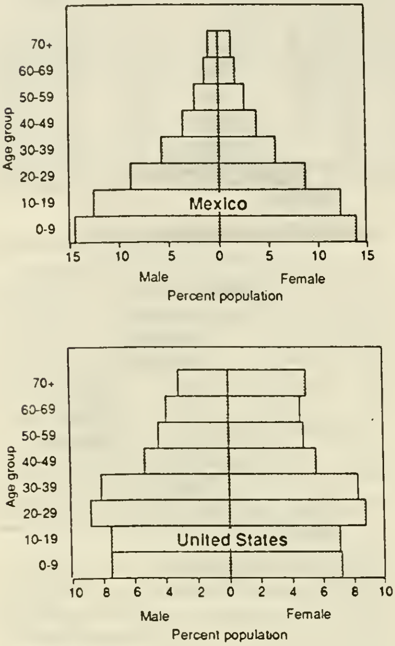
On average, wages for recent immigrants are more than 20 percent below those for native workers, and Mexicans earn lower wages than immigrants from other countries (figure 6-2).[8] It makes little difference whether or not the new immigrants have legal status. In local labor markets, Mexican immigrants depress wages to some degree. (New immigrants are most likely to depress wages for older immigrants, since both old and new are likely to seek similar work.) But competition for jobs in local labor markets is not the only source of impacts on U.S. jobs and job opportunities.

Immigration increases the overall supply of low-skilled workers in the United States directly. Trade (with Mexico and with other countries) has the same effect indirectly if the United States imports goods produced by low-skilled foreign workers while exporting goods produced by higher skilled labor. Under these circumstances, trade will displace low-skilled jobs in the United States, creating an "excess" of low-skilled labor. Both immigration and trade can thus drive down wages for low-skilled U.S. workers. Estimates based on input-output tables suggest that, in 1988, immigration (from all countries) and trade (with all countries) had, together, increased the effective supply of high school dropouts in the United States by 28 percent for men and 31 percent for women.[9] Combining these estimates with reasonable assumptions about the substitutability of dropouts and graduates indicates that trade and immigration flows may explain 30 to 50 percent of the approximately 10-percent decline in the relative weekly wage of high school dropouts between 1980 and 1988 (see ch. 4, figure 4-1). Because Mexico is the largest source of U.S.

[8] The wage gap between immigrants and native workers similar in age and educational attainment was 22 percent in 1980: it has been increasing: immigrants earned 2.6 percent less in 1940, 11 percent less in 1960, and 15 percent less in 1970. One reason is that earlier waves of immigrants from developed countries in Europe were more likely to have skills in high demand in the U.S. labor market. George J. Borjas, "Immigrants in the U.S. Labor Market: 1940-80," *American Economic Review*, vol. 81, 1991, pp. 287-291.

[9] George J. Borjas, Richard B. Freeman, and Lawrence F. Katz, "On the Labor Market Effects of Immigration and Trade," Working Paper No. 3761, National Bureau of Economic Research, Cambridge, MA, June 1991. In 1988, immigrant workers increased the supply of high school dropouts by approximately 25 percent, the supply of high school graduates by 6-7 percent, and the supply of college graduates by 10-11 percent.

Figure 6-3—Age Distributions in Mexico and the United States



SOURCE: United Nations

immigrants, and because Mexican immigrants have lower skills on average than immigrants from elsewhere, immigration from Mexico would probably account for something over half of the effect of all immigration on the relative wages of U.S. high school dropouts.[10] Immigration thus appears to have had significant impacts on employment and wages for U.S. workers, even if those impacts can be estimated only roughly.

Factors Influencing Immigration From Mexico

Migration from Mexico to the United States responds to three major influences:

- income inequalities within Mexico, plus demographic and socioeconomic differences between the two countries;
- migration networks that have matured and become entrenched over the past several decades; and
- U.S. immigration policy.

Given the cumulative impacts of these factors, there seems little likelihood that migration will slow appreciably over the next two decades. The United States could not unilaterally stop entry by illegals short of militarizing a 2,000-mile border. There is little the Mexican Government can do to stop migration without dramatically improving living standards for the many millions of poorer Mexicans at the bottom of a highly unequal social pyramid.

Demographic and Socioeconomic Factors

Mexico will have great difficulty creating new jobs for the many people who will enter the labor force in the years ahead. More than half of all Mexicans are under the age of 20, reflecting high birth rates in past years. The population is currently increasing at about 2.3 percent per year, doubling every 30 years or so.[11] The pyramidal age distribution shown in figure 6-3 creates a high degree of momentum for further growth: even if fertility dropped to replacement levels, Mexico's population would continue to increase for several decades as young people entered their reproductive years.

Unless unemployment and underemployment come down, and wages rise, pressures to emigrate could grow rather than diminish.[12] After World War II and

[10] Except for 1987, the United States has exported more manufactured goods to Mexico than it has imported in every year since 1983 (ch. 3). The $22.9 billion in U.S. imports from Mexico during 1991 would probably have required more less-skilled labor to produce than the $31.1 billion in exports in that year. Thus trade with Mexico, despite being in substantial surplus, could also have had negative effect on the relative earnings of less skilled U.S. workers.

[11] *1992 WP Data Sheet* (Washington, DC: Population Reference Bureau, 1992). In contrast, the U.S. population is growing at only 0.8 percent per year (including growth due to immigrants), for a doubling time of 90 years.

[12] While relative wages in Mexico and the United States will be a major force in determining future rates of immigration, there is much more to socioeconomic development—and to peoples' propensity to migrate in search of a better life—than their money incomes, as discussed in box 3-A in chapter 3.

until about 1980, Mexico's gross domestic product (GDP) grew at about 6 1/2 percent annually, before dropping during the 1980s. If GDP growth averages 3 percent over the period 1985-2000, Mexico can expect some 10 million "excess" workers by the turn of the century; if GDP growth averages 5 percent, the predicted excess would still reach 6 million.[13] It seems highly unlikely that Mexico's economy could expand fast enough to absorb all new labor force entrants: this would take an unprecedented growth rate of more than 10 percent annually.

Because Mexico's future growth will depend heavily on foreign investment, failure to reach a free trade agreement would ensure more immigration to the United States. On the other hand, socioeconomic improvements in Mexico may initially result in an increase in migration to the United States rather than the decrease expected over the long term. The reason is that expectations could well rise faster than economic improvements in Mexico can be realized.[14]

Migration Networks

Flows of immigrants from particular regions in Mexico to particular regions in the United States have become strongly established over several generations. Mexicans crossed the border to work on railroads at the turn of the century, then to work on farms, still later to work in the growing Los Angeles garment industry.

Currently, the two major migrant streams come from the border region and from rural areas and small towns in Mexico's interior. Immigrants from the border region typically shuttle between jobs in U.S. cities and homes in Mexico. Aided by family and friends, they make repeat trips to the same U.S. city and often the same job. Migrants from the interior are more likely to be undocumented and more likely to end up staying in the United States because of the distance from their home. Having, on average, less education, they generally start lower on the job ladder, but show somewhat more upward mobility than border migrants.[15] The longer migrants from either group stay in the United States, the more likely they are to move into better jobs, bring in family members, and become permanent U.S. residents.

U.S. Immigration Policy

IRCA was intended to slow illegal immigration by requiring employers, for the first time, to verify the legal status of those they hired. But because forged papers are cheap and easily available and because employers have little incentive to closely question those they hire, or to give their papers more than a cursory look (they need not even keep copies on file), the law has been easy to circumvent.[16] Apprehensions of illegals (the only routinely available indicator of entry) dropped sharply after passage of IRCA in 1986, but rose again to 1.2 million in 1990—the same as in 1983.[17] Not only does it seem impossible for the United States to appreciably slow the flow of undocumented workers, but as Mexico continues to industrialize, more workers will develop skills in demand in the United States, increasing their attractiveness to U.S. employers (for some of whom, undocumented workers are not only cheap, but easier to control, and less likely to complain than legal immigrants or native-born workers).

Pressures to migrate grow with rapid population increases in many parts of the Third World. Even if wealthy nations provided considerable development assistance to their poorer neighbors, these pressures seem bound to increase. It may be time to rationalize migration on an international level; as a first step, for instance, the United States could initiate discussions aimed at international agreement on the definitions of such migrant categories as political refugees. It would also seem desirable to establish an interna-

[13] Saul Trejo Reyes, "Mexican-American Employment Relations: The Mexican Context," *U.S.-Mexico Relations: Labor Market Interdependence*, Jorge A. Bustamante, Clark W. Reynolds, and Raúl A. Hinojosa Ojeda, eds. (Stanford, CA: Stanford University Press, 1992), table 6, p. 265. By Reyes's definition, Mexico has about 2 1/2 million excess workers today.

[14] *Unauthorized Migration: An Economic Development Response*, Report of the Commission for the Study of International Migration and Cooperative Economic Development (Washington, DC: U.S. Government Printing Office, July 1990).

[15] In the rural towns of Texas and California, immigrants from the interior find work in agriculture or sawmills, as craftsmen or service workers; in urban areas, they tend to work in construction or service jobs. Richard Jones and William Murray, "Occupational and Spatial Mobility of Temporary Mexican Migrants to the U.S.: A Comparative Analysis," *International Migration Review*, vol. 20, 1986, pp. 973-985.

[16] Robert L. Bach and Howard Brill, "Impact of IRCA on the U.S. Labor Market and Economy," Final Report to the U.S. Department of Labor, Institute for Research on Multiculturalism and International Labor, State University of New York at Binghampton, April 1991.

[17] Borjas, "The Economic Consequences of Migration," op. cit., footnote 6.

Chapter 10

Agriculture

SUMMARY

The agricultural and food processing sectors of the United States and Mexico complement and compete, depending in part on static factors such as climate, rainfall, and arable land, and in part on dynamic factors including technology, labor costs, capacity utilization, transportation costs, and government policies (subsidies, trade restrictions). Agricultural imports from Mexico compete primarily with products from warm-weather States, and Florida more than California or Texas.

Today, many of Mexico's agribusiness establishments, some of which are foreign-owned, have relatively low costs and high yields and productivity levels. But their yields—if much higher than in Mexico's small-scale, traditional farming sector—lag well behind those routinely achieved in the United States, depending on the crop and location. This lag reflects a broadbased deficit in agricultural technology—including cultivation practices, mechanization, and seed varieties and agricultural chemicals (fertilizers, herbicides, pesticides) suited to Mexican conditions. With a few exceptions where Mexico's climate creates large advantages, Mexican farmers and food processors, like their counterparts in manufacturing, rely on low labor costs to compete.

Fruits and vegetables—particularly those that require picking, trimming, and packing by hand rather than machine—are much more labor intensive than other agricultural products. These are the products—tomatoes, cucumbers, broccoli, radishes, green onions—in which Mexican growers and packers have been able to undercut U.S. costs. But even here, the seasonal nature of production means that Mexican products may compete with those from some parts of the United States, while complementing production elsewhere. For instance, Florida cucumber shipments reach their highest levels during November-December and April-May, while California ships at relatively constant levels from May through November. Imports of cucumbers from Mexico reach their peak during the December-March gap.

OTA's analysis of U.S.-Mexico trade and competition in agriculture leads to the following conclusions:

- Despite lower labor costs for most agricultural products, Mexico could not expect to achieve across-the-board advantages in agriculture even if all trade restrictions were removed. The United States would retain large advantages rooted in agricultural research (including biotechnology). These advantages include superior plant and livestock varieties and cultivation practices creating yield and productivity margins sufficient to offset Mexico's low labor costs. Indeed, costs increased more rapidly in Mexico than in the United States during the 1980s, in part because Mexico's government has been reducing subsidies (e.g., for fertilizers, fuel, and electricity).
- Mexico's primary agricultural exports—fresh winter fruits and vegetables—compete most directly with production in Florida, which has a similar growing season. Florida is as far or farther from many major U.S. markets (e.g., the West Coast) as the regions in Mexico with which it competes; as Mexico's transportation system improves, the advantages Florida has historically gained from rapid, reliable, low-cost shipping will diminish. Florida farmers would probably experience a greater share of adjustment costs following a North American Free Trade Agreement (NAFTA) than farmers in other States.
- Growing seasons in California less frequently overlap those in Mexico. While substantial production and processing capacity—notably for broccoli—has moved to Mexico, California growers have had little trouble in switching to other crops. Generally speaking, farmers in States other than Florida and California are less likely to face direct competition with Mexico.
- U.S. farmers produce grains at much lower cost than Mexican farmers, much of it for animal feed. Transportation costs for feedgrains would probably preclude the widespread relocation of cattle feeding to Mexico, even if Mexico could achieve comparable efficiencies. Because it is more costly to ship cattle than feed, beef

packing will remain concentrated in the U.S. grainbelt. While some meatpacking jobs may be lost to Mexico, U.S. packers have been aggressive in driving down domestic wages and working conditions, reducing the attractions of Mexican labor. Because transportation is less of a barrier for poultry than for beef, Mexico's low labor costs could attract production and processing of chicken and turkey.

- Cow-calf imports from Mexico to supply U.S. feedlots would probably grow following a NAFTA, at the expense of competing operations in Texas and other border States. But limits on Mexican range land, water, and feed, along with transportation costs, would probably limit the market share of imported feeder calves to about 5 percent (compared to past shares in the range of 3 percent).
- Mexico itself faces fundamental limits on production of food, for domestic consumption as well as for export, beginning with limited amounts of arable land and water for irrigation. Competition for water is increasing as the economy industrializes and urbanizes. These factors limit Mexico's ability to expand production for export, reducing the potential threat posed to U.S. agriculture as a whole. Because the population is rising rapidly, and because of U.S. advantages in grain production, Mexico will continue buying wheat, corn, and feedgrains from the United States. Mexico also has the potential to become an important market for grain-based products such as beef as income levels rise.
- A NAFTA would probably increase the rate at which *ejido* farmers are displaced, exerting additional downward pressure on wages for unskilled workers in both Mexico and the United States.

Although the two agricultural sectors have been integrating, the pace has been slow. Three factors account for this: Mexican Government policies; U.S. policies, especially trade restrictions; and the technological advantages of the United States, which for products such as Florida tomatoes have enabled farmers in potentially vulnerable regions to maintain or even increase cost- and quality-based advantages.

For 75 years, Mexico's government has supported small-scale, traditional agriculture through distribution of *ejido* lands and a wide variety of subsidies. The results included farms and food processing plants below minimum efficient size, discouragement of a modern agricultural sector, and rising imports of food. These policies began to change during the 1980s, with restrictions on land ownership lifted in January 1992. While some *ejidos* will be consolidated, much of the land is too poor to produce at competitive cost levels regardless of money spent on improvements.

Where Mexico has achieved competitive costs, it has been in cases where low wages offset low efficiency. Despite high labor costs compared to Mexico, U.S. growers benefit from a broad range of government policies. Some enjoy low cost water for irrigation. Tariffs have helped preserve market share and profits, as have better distribution, superior quality, and longer in-store shelf lives for perishable commodities. Moreover, many U.S. growers faced with low-cost imports in their traditional products have successfully switched to crops more suited to the changing competitive environment.

In the United States, both the private and public sectors are eager to develop and introduce new agricultural and food processing technologies. Government has helped diffuse best practices through the agricultural extension program. In contrast, Mexico has neither the seed companies and agrochemical firms to develop and supply new products, nor the agricultural research organizations to support the underlying technology base. Mexican farmers must usually be content with seed and fertilizers developed for U.S. conditions.

MEXICAN AGRICULTURE: TRADE AND STRUCTURE[1]

Only Japan and the former Soviet Union buy more U.S. agricultural products than Mexico. And only

[1] This discussion is based in part on "Agricultural Issues in U.S.-Mexico Economic Integration," report prepared for OTA under contract No. I3-0310 by B. Kris Schulthies and Gary W. Williams, April 1992. Information otherwise uncited comes from this report, which relies heavily on Mexican Government statistics.

For summary information on Mexican agriculture, see *Foreign Agriculture 1990-91* (Washington, DC: U.S. Department of Agriculture, Foreign Agricultural Service, August 1991), pp. 82-83. Also "U.S., Mexico Seek Economic Boost from Free-Trade Pact," *Farmline*, February 1991, pp. 2-6; and *The Likely Impact on the United States of a Free Trade Agreement with Mexico*, USITC Publication 2353 (Washington, DC: U.S. International Trade Commission, February 1991), pp. 4-3 to 4-17.

Table 10-1—U.S.-Mexico Agricultural Trade, 1991

	U.S. exports to Mexico	U.S. imports from Mexico	Balance[a]
	(millions of dollars)		
Total	$2,998	$2,527	$471
Livestock and livestock products (all)	1,128	392	736
Fats and offals	207	1	206
Hides and skins	137	4	133
Dairy products	121	3	118
Beef	185	—	185
Cattle	133	361	(228)
Poultry	131	0	131
Pork	68	0	68
Other	146	24	122
Grains and feeds (all)	739	64	675
Wheat and wheat flour	48	—	48
Corn	148	—	148
Sorghum	372	—	372
Other	171	64	107
Fruits and vegetables (all)[b]	183	1,233	(1,050)
Tomatoes			
Fresh	4	250	(246)
Processed	—	18	(18)
Broccoli and cauliflower, fresh and frozen[c]	—	102	(102)
Peppers	—	111	(111)
Onions	5	90	(85)
Cucumbers	—	73	(73)
Squash	—	50	(50)
Strawberries	—	37	(37)
Grapes	—	54	(54)
Mangoes	—	54	(54)
Melons	—	98	(98)
Citrus, fresh and processed	—	78	(78)
Other	174	320	(146)
Coffee	2	333	(331)
Seeds	87	6	81
Sugar and related products	114	33	81
Oilseeds and related products	524	43	481

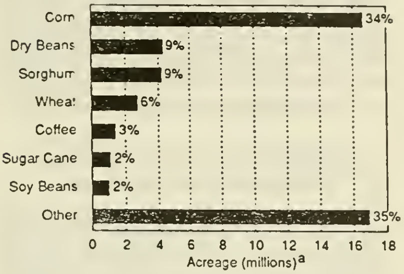
[a]Parentheses denote negative balance (U.S. imports from Mexico greater than U.S. exports to Mexico).
[b]Total includes fresh and processed fruits and vegetables, subheadings refer to fresh produce unless otherwise noted.
[c]The U.S. Department of Agriculture provides only the combined total for imports of fresh and frozen broccoli and cauliflower.

SOURCES: *Foreign Agricultural Trade of the United States: January/February 1992* (Washington, DC: Department of Agriculture, Economic Research Service, 1992), table B-3, pp. B4-B42; *Foreign Agricultural Trade of the United States, Calendar Year 1991 Supplement* (Washington, DC: Department of Agriculture, Commodity Economics Division, Economic Research Service, July 1992), table 23, p. 399.

Canada ships more agricultural goods to the United States. But the relationship between the United States and Mexico is hardly symmetrical (table 10-1): Mexico needs inexpensive U.S. grain and milk products far more than the United States needs Mexican feeder cattle or tomatoes. Mexico sends more than three-quarters of its agricultural exports to the United States, but the United States buys only about 12 percent of its agricultural imports from Mexico.

Crop production accounts for 58 percent of the value of Mexico's agricultural output, livestock for 33 percent, and forestry, fishing, and hunting for the remaining 9 percent. As noted in chapter 3, agriculture accounts for about 9 percent of Mexico's gross domestic product (GDP). The majority of the country's 4 1/2 million farms are small and inefficient. Many still use traditional practices, producing corn and beans for subsistence and local consumption. Corn grows on about a third of Mexico's arable land (figure 10-1). Over half of the agricultural labor

Figure 10-1—Cultivated Acreage by Crop in Mexico



aAverage, 1985-1989.

SOURCE: "Agricultural Issues in U.S.-Mexico Economic Integration," report prepared for OTA under contract No. I3-0310 by B. Kris Schulthies and Gary W Williams, April 1992, table 4, p. A3.

force works in the traditional sector, many on a casual or seasonal basis; the modern sector, which accounts for only a small minority of farms, produces perhaps three-quarters of total output.[2]

Land and water set fundamental limits for Mexican agriculture. Only 12 percent of the country's land is arable—some 57 million acres—compared with 464 million arable acres in the United States (a little over 20 percent of all U.S. land). Although the United States has eight times more arable land, it has only half as many farms. About half of the arable land in Mexico could be irrigated, but 60 percent of this land remains rainfed.[3] Mexican agriculture suffers from salinity in much of its limited supply of water and from widespread erosion. Irrigated as well as rainfed lands in Mexico are subject to the vagaries of weather, since most irrigation water comes from reservoirs rather than underground aquifers (many of which are being rapidly depleted in any case).

After Mexico's revolution, foreigners were barred from owning land. Thus, foreign direct investment (FDI) in agriculture has been very low, with officially recognized investment totaling only a cumulative $30 million in 1990 compared with $18 billion for industry. Food processing plants operated by a dozen or so U.S.-based multinational corporations (MNCs) account for about half a billion dollars of Mexico's FDI ($470 million in 1989, included in the industry total), and a substantial share (perhaps one-third) of Mexico's total food processing capacity.[4]

Subsistence Farming: The Traditional Sector

In January 1992, the Salinas government's land reform program went into effect.[5] The intent is to modernize traditional farming, beginning with changes in laws governing land ownership and use that date to 1917. The *ejido* system was intended to reduce the power of prerevolutionary landowning families by redistributing their huge holdings to the peasantry, while ensuring that peasants retained their land. The state held title to *ejido* plots—in principle 10 hectares (about 25 acres), but in practice averaging less than half that—and granted peasants usage rights. *Ejidos* could not be legally sold, rented, or used as collateral. Over the years, slightly over half of those eligible received land.[6] The Mexican Government also maintained highly restrictive ownership policies on land outside the *ejido* sector. For example, individuals cannot own more than 100

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[2] Alejandro Portes and Lauren Benton, "Industrial Development and Labor Absorption: A Reinterpretation," *The Informal Economy: Studies in Advanced and Less Developed Countries*, Alejandro Portes, Manuel Castells, and Lauren A. Benton, eds. (Baltimore: Johns Hopkins University Press, 1989), pp. 589-611. Many *ejidatarios* must seek employment on larger, more prosperous farms in the modern sector to supplement their income. Martine Vanackere, "Conditions of Agricultural Day-Labourers in Mexico," *International Labour Review*, vol. 127, 1988, pp. 91-110.

[3] Lloyd E. Slater, "Food: U.S. Perspective," *U.S.-Mexican Industrial Integration: The Road to Free Trade*, Sidney Weintraub, Luis Rubio F., and Alan D. Jones, eds. (Boulder, CO: Westview, 1991), p. 276.

[4] Libby established a food processing facility, currently owned and operated by Heinz, in 1929. Other examples of U.S. MNCs with processing facilities in Mexico include: Green Giant, Kellogg, Gerber, Del Monte, and Ralston Purina. Slater, "Food: U.S. Perspective," ibid., pp. 280-281, and industry interviews. In addition, a number of U.S.-owned *agro-maquilas*, like their counterparts in manufacturing, import everything from tractors to corn to cardboard packaging, perform labor-intensive processing (e.g., of tortilla chips) in Mexico, then send the finished products back to the United States. But these operations are not very representative. While the *agro-maquila* sector has been expanding rapidly, in 1990 there were fewer than 50 such firms, producing goods valued at around $100 million. Joel Millman, "'There's Your Solution'," *Forbes*, Jan. 7, 1991, pp. 72, 76.

[5] This discussion is based on an interview with Guillermo Ramos, Agricultural Counselor, Embassy of Mexico, Washington, DC, July 14, 1992.

[6] Some 2 1/2 million Mexicans still have outstanding claims, while 3 million have received land. "The Legal Proposal for Mexico's Agricultural Reform: Background Information," Embassy of Mexico, Washington, DC, November 1991, p. 5.

hectares of irrigated farmland.[7] Corporations could not own land at all.

Today, modern agriculture is concentrated on irrigated land in northwestern Mexico, with the bulk of the *ejidos* in the central part of the country. Crops are raised on a little over 20 percent of *ejido* acreage; the rest is wooded or used for grazing. *Ejidatarios* had little incentive to leave their land, which they could not sell, nor to invest in improvements; only 17 percent of *ejido* croplands are irrigated.

The burden of these policies finally proved unsustainable. As noted in chapter 3, Mexico was left with a great many people in agriculture in proportion to output, while the government continued pumping money into price supports and subsidies for fertilizer, water, electricity, and diesel fuel.[8] Both price supports and subsidies have been heading downward since the middle 1980s, a consequence of crisis and *apertura*.

The 1992 reforms substantially changed the rules for land ownership and use. *Ejidatarios* will get title to their lands. While individuals are still limited to 100 hectares, foreigners can purchase land on much the same basis as Mexican citizens. Corporations, domestic and foreign, may own up to 2,500 hectares (about 6,200 acres).

Steady reduction in subsidies, coupled with the changes to the *ejido* system, promises to displace many small farmers from marginal land, which will no longer be worth cultivating. Meanwhile, the modern sector will expand as more prosperous farmers assemble larger plots and purchase higher quality *ejido* acreage. More *ejidatarios* will be able to join the modern sector; others will be displaced and seek work in market-oriented agriculture or move to cities. Management of this transition by Mexico will have consequences for the United States, most likely in higher levels of immigration, as well as for the future of the Mexican economy.

Industrialized Agriculture and Food Processing: The Modern Sector

While the traditional sector came close to collapse, the modern sector increased in scale and scope, becoming substantially integrated into the North American regional market. The modern sector has drawn to considerable extent on U.S. know-how, buys U.S. farm machinery, and relies to some extent on U.S. capital. Even so, it remains on average significantly less advanced than commercial farming as practiced in the United States. The development of large commercial farming and food processing operations in Mexico has been driven, not only by exporting, but by the need to feed a rapidly growing urban population.

Mexican farmers devote only 2 to 4 percent of their land to fruits and vegetables, but horticultural products account for 9 percent of total output value and for more than half of Mexico's total agricultural exports.[9] Mexico supplies more than 80 percent of all fresh vegetables imported by the United States—not surprising given that fresh vegetables do not travel well.[10] Tomatoes account for nearly half of

[7] Limits vary by use: up to 400 hectares (967 acres) of grazing land and 200 hectares of nonirrigated farming land, but for certain crops (e.g., cotton, coffee, bananas, fruit trees), 150 hectares of irrigated land or 300 hectares of nonirrigated land. These restrictions, like those on *ejido* holdings, have been circumvented in various ways. For example, a large farm might be put together with title to the land distributed among family members. Many *ejido* lands are leased and many are part of Mexico's modern farming sector.

[8] The agricultural labor force continued to rise at least through the 1980 census, growing from an estimated 4.8 million in 1950 to 5.6 million in 1980, despite the industrialization and urbanization taking place over this period. Francisco Alba, "Migrant Labor Supply and Demand in Mexico and the United States: A Global Perspective," *U.S.-Mexico Relations: Labor Market Interdependence*, Jorge A. Bustamante, Clark W. Reynolds, and Raúl A. Hinojosa Ojeda, eds. (Stanford, CA: Stanford University Press, 1992), pp. 243-256.

With CONASUPO (*Compañía Nacional de Subsistencias Populares*, the government's agricultural distribution and marketing organization) purchasing corn and many other farm products at guaranteed prices, subsidy and support levels in some years exceeded 60 percent of the value of agricultural output. "Mexico After the Oil Boom: Refashioning a Development Strategy," World Bank Report No. 6659-ME, Washington, DC, June 23, 1987, p. 38; Myles J. Mielke, "Government Intervention in the Mexican Crop Sector," Staff Report No. AGES89-40, U.S. Department of Agriculture, Economic Research Service, Washington, DC, September 1989. As recently as the mid-1980s, the government subsidized purchases of diesel fuel by 30 percent and fertilizer by about 60 percent. *NAFTA. Effects On Agriculture; vol. IV, Fruit and Vegetable Issues* (Park Ridge, IL: American Farm Bureau Research Foundation, 1991), p. 104. The government also used negative subsidies to discourage some types of production.

[9] *NAFTA. Effects on Agriculture; vol. IV, Fruit and Vegetable Issues*, ibid., pp. 4, 6.

Reportedly, 2 percent of Mexican agribusinesses account for three-quarters of value-added. Steven E. Sanderson, *The Transformation of Mexican Agriculture: International Structure and the Politics of Rural Change* (Princeton, NJ: Princeton University Press, 1986), p. 100.

[10] Of Mexico's total shipments of vegetables to the United States, 85 percent is shipped fresh, 10 percent frozen, and 5 percent canned. *NAFTA: Effects on Agriculture: vol. IV, Fruit and Vegetable Issues*, op. cit., footnote 8, pp. 19, 20. The percentages quoted here and below fluctuate depending on price levels, which in turn reflect output as influenced by the vagaries of the weather in the growing regions of both countries.

food could increase at 5 to 6 percent per year, with Mexico likely to become more dependent on imported food. The agricultural sector must overcome a decade of declining investment, adjust to lower government supports and subsidies, and contain rapidly rising costs per unit of output—all the while depending on outsiders for technology.

CONCLUDING REMARKS

A NAFTA would accelerate the integration of North American agribusiness. Mexico must buy food abroad, and the United States will be the preferred source for many products. In return, Mexico will send larger quantities of fruits and vegetables northwards. These shipments will not overwhelm U.S. farmers, who have amply demonstrated their flexibility and resilience in the face of manmade as well as natural obstacles. Still, gains and losses from a NAFTA will be concentrated geographically and by product, and for growers who have trouble switching to new crops there will be little solace in a NAFTA that benefits U.S. agriculture as a whole.

The seasonal nature of fruit and vegetable production means that Florida competes most directly with Mexico. But restricted supplies of land and water will limit Mexico's capacity to expand production, and, together with rising domestic demand, limit the volume of fresh fruits and vegetables shipped to the United States. OTA's analysis, finally, suggests that Mexico poses little threat in cattle feeding and meat packing. Limited grazing lands and rising beef consumption will preclude a dramatic increase in exports of feeder cattle. Transportation costs for grain counterbalance Mexico's low labor costs in feeding and packing. Indeed, Mexico will probably import greater quantities of U.S. beef in the years ahead.

Movement of people, rather than movement of goods, may have the greatest implications for the United States. Mexico's agricultural reforms will drive large numbers of people off the land. Many of these people will move to urban areas where they will put downward pressure on wages for low-skilled jobs, with spillover effects here. Some will emigrate to the United States.

DRAFT - 9/93

NAFTA and Labor in Mexican Fruits and Vegetables[1]

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Various studies predict major dislocation of agricultural labor and increased migration in Mexico with trade liberalization under the North American Free Trade Agreement (NAFTA). For example, Burfisher, Robinson, and Thierfelder (1992) forecast that full liberalization of trade in agriculture will increase rural outmigration by 280,000. In addition, complete liberalization of the maize sector is estimated will lead to outmigration as high as 500,000 workers. Even with no policy changes, Levy and van Wijnbergen (1992) estimate expected rural outmigration at 1.1 million over a ten-year period. Unilateral liberalization of the Mexican maize sector would increase this outmigration by 800,000 in their model, but investment in irrigation and trade liberalization under NAFTA would reduce it by half, as the increased production of fruits and vegetables would employ labor in rural Mexico.

While aggregated models are useful, the comparative statics nature of most of them often masks adjustment problems which only detailed micro-level analysis can reveal. Furthermore, concerns about adjustment are critical elements in the policy debate over NAFTA. This paper argues that the amount of agricultural labor which could be dislocated in rural Mexico, as predicted by these macro models, is, in fact, artificially low. They underestimate the amount of labor employed in rainfed maize production, and they assume unachievably rapid growth in fruit and vegetable production, perfect mobility of irrigated land into fruits and

vegetables, and relatively high fruit and vegetable employment generation. Problems of actually selling fruits and vegetables are not considered. If the growth in fruit and vegetable employment in Mexico is substantially lower than commonly predicted, and if peasants do, in fact, abandon maize production, then even greater migration to Mexican urban areas and the United States can be expected, with its accompanying impact on low-skilled wages.

Maize and the Supply of Labor

On the supply side of the labor market, these macro models predict large-scale outmigration from the peasant sector because they assume that peasants are important sellers of maize, and that a drastic fall in the price of maize from trade liberalization will cause them to abandon production. Several commentators have objected to this scenario, on the grounds that most peasant households who sell maize have relatively diversified sources of income, and thus the income effect of a decrease in the maize price is less than assumed in the macro models (Taylor, 1993; Cornelius and Martin, 1993). Taylor, in fact, argues that, in his Computable General Equilibrium (CGE) model of a village in Michoacán, declining maize prices have relatively little impact on migration (Taylor, 1993). However, the village studied is already heavily migratory and this leaves open the question of the impact on more closed, maize-producing villages.

Moreover, models such as Levy and van Wijnbergen's seriously underestimate the amount of labor used in rainfed maize production. Marsh, in a study in Michoacán, reports 52 person-days per hectare for producers with only rainfed maize (Marsh, 1991; 1992). A study we conducted in Guanajuato found that producers who also had irrigated land (and, hence, likely used more advanced technology) utilized 34 person-days per hectare on their rainfed maize. In contrast, Levy and van Wijnbergen assume rainfed maize requires only 18.4 person-days per hectare. Thus there is considerably more labor employed in the peasant maize sector, which could be dislocated with liberalization.

To summarize, the models predict massive outmigration because they assume a relatively high elasticity of supply in rainfed maize and they do not capture the diversification of the peasant household. It is probable that NAFTA will not have as extreme an effect, in the short run, on the decision to produce maize as predicted. However, rainfed maize employs a great deal of labor in rural Mexico, and a combination of policies which discourage peasant production could dislocate a large workforce.

NAFTA and Mexican Fruits and Vegetables

In the debate over the effects of NAFTA, analysts and industry representatives have, from the start, asserted that labor-intensive fruit and vegetable production and processing would tend to shift to Mexico. This result appears in all of the general equilibrium models which have enough detail to break out

fruits and vegetables (e.g. KPMG-Peat Marwick, 1991). In the most detailed such model, full trade liberalization increases Mexican exports of fruits and vegetables about 25 percent, and U.S. exports about 15 percent (Burfisher, Robinson, and Thierfelder, 1992). In the USDA partial equilibrium model (SWOPSIM), Mexican horticultural exports rise by $98 million dollars and U.S. exports by only $3 million (Kissoff, Neff and Sharples, 1992). In this latter study, U.S. consumption of Mexican exports expands by more than 10 percent in such products as tomatoes, green peppers, onions, cucumbers, and melons, and 32 percent in frozen orange juice (as summarized in Josling, 1992).

Since horticultural products are Mexico's principal agricultural exports, accounting for 52 percent of total value in 1990, and since they tend to be relatively labor-intensive crops, this is a commonsense result. It therefore also appears in most of the NAFTA papers based on commonsense reasoning. For example, the early study (February 1991) from the International Trade Commission concluded with respect to horticultural products that:

> "The elimination of tariffs and NTBs under an FTA would generate a significant increase in U.S. imports from Mexico and a moderate increase in U.S. exports to Mexico. Mexican producers are able to supply the U.S. market **at much lower costs** with many of the same products grown or processed in the United States." (U.S. International Trade Commission, 1991, pp. 4-3, 4-8, emphasis added).

However, recent studies of a variety of fruits and vegetables conclude that, while Mexico is highly competitive in certain crops, it does not have an absolute cost advantage in

many others, even with the complete removal of trade barriers and tariffs, and that in a number of instances the crops are exported to the United States only because they are grown counter-seasonally to U.S. production (Cook, et al., 1991; Bivings and Runsten, 1992; Runsten, et al., 1992; Gómez Cruz, et al., 1991). Thus, while the removal of tariffs might increase demand in the United States for Mexican fruits and vegetables as price falls, it is unlikely that much production will shift from the United States to Mexico due to the free trade agreement alone. There are some notable exceptions to this, such as avocados, but, as in that case, the obstacles to Mexican exports are not tariff barriers but phytosanitary restrictions and other marketing obstacles (see Cook, et al., 1991).

While data on aggregate production of fruits and vegetables in Mexico is poor, Figure 1 shows that exports of all horticultural products approximately doubled in volume between 1981 and 1990.[2] Of interest is that this volume leveled out in the late 1980s due to the recession in the United States, the constant revaluation of the peso relative to the dollar after 1986, and the restart of economic growth and consumer demand in Mexico. Exports of fruits and vegetables from Mexico are not generally increasing at this time, despite relatively low wages in Mexico compared to the United States. In fact, exports of horticultural products from the United States to Mexico, especially fresh fruit and processed vegetables, have been increasing at a high rate while Mexican exports have stagnated

(Bivings and Runsten, 1992).

[FIGURE 1 about here.]

At this point, labor is one of the only areas in which Mexico still has a cost advantage, and we argue in this paper that it is not as big an advantage as commonly perceived. With liberalization of the economy and reduction in government subsidies, other input costs are often as high or higher than in the United States. In addition, Mexican production has run into serious, long-term problems with water availability, salinity, and diseases, which cause yields to be often significantly lower than in the United States, as well.[3]

In the rest of this paper, we will examine data on wages, productivity, and labor demand in U.S. and Mexican fruit and vegetable production which help to explain this situation, and challenge the potential for Mexican production of fruits and vegetables to slow Mexican outmigration.

Wages and Labor Productivity

It is well known that wages are much lower in Mexico than they are in Canada or the United States, and this is as true in agriculture as it is in industry. It is important to recognize, also, that Mexican wages lost a great deal of value in the last decade due to the economic crisis which began in the late 1970s and accelerated after 1982.

In Figure 2, the real minimum wage is graphed against the real average industrial wage in Mexico for 1970-1990. One can see that, while the minimum wage began to lose value after the 1976 devaluations, industrial wages in general only began to decline after the 1982 devaluations. There was then a very sharp decline through most of the 1980s, corresponding to stagnation in the Mexican economy and the Pacto de Solidaridad, which imposed wage and price controls. As the 1980s ended, the economy began to grow again and real industrial wages bottomed out.

[FIGURE 2 about here.]

The real minimum wage continues to decline, however, as part of the Pacto, and as part of the liberalization of the economy to let wages be set by market forces. The minimum wage in Mexico in early 1992 varied by region and occupation, but the lowest was approximately 10,000 pesos per day ($3.25) and the highest (for basic labor) was 13,300 pesos per day ($4.33).

It is difficult to hire even agricultural labor at such low wages in many areas of Mexico. For example, in Baja California, where most field and packing house labor must be constantly imported from southern Mexico, the going wage in early 1992 was 20,000-25,000 pesos per 8-hour day, or almost twice the minimum wage. In the Zamora, Michoacán, area, growers were paying 18,000-25,000 pesos for 5-6 hours of work. In Guanajuato, growers typically paid 15,000 pesos for 5 hours of work. A

reasonable assumption is thus that in the principal fruit and vegetable regions in 1992 it cost almost $1.00 per hour for seasonal field labor.

For comparative purposes, in the United States in 1992 the minimum wage was $4.25 per hour, while the average agricultural wage in 1991 was $5.57 according to the Department of Agriculture's Farm Labor Survey, and $5.79 according to the Department of Labor's National Agricultural Worker Survey. Thus, a realistic ratio would be 6:1 between U.S. and Mexican hourly agricultural wages. However, U.S. employers typically pay 15-30 percent more in mandated insurance (depending on the state), while Mexican agricultural employers do not generally pay social security for seasonal workers (Runsten, et al., 1992; Barrón, 1991). Therefore, the difference in the cost of labor to employers for such workers could easily be 7:1 or 8:1 between the two countries.[4]

While there is still a clear surplus of unskilled labor in Mexico, Mexican growers complain of a scarcity of skilled agricultural workers. As a result, there is a certain tendency to shift to piece rates and introduce mechanical harvest aids in some regions of the country in search of higher productivity. In the Bajío, workers harvesting under piece rate schemes in broccoli, garlic, and similar crops earned up to 30,000-100,000 pesos per day.

Nevertheless, the productivity of labor in Mexican agriculture is notoriously low. Table 1 compares productivity

estimates for a number of crops in Mexico to available California data. Notice that, even though yields are generally lower in Mexico, more labor is utilized per hectare. Mexican labor productivity is one-fourth California's in strawberries and tomatoes, 35 percent in asparagus harvesting, but 66 and 69 percent respectively in cauliflower and broccoli.

[TABLE 1 about here.]

One example of how lower productivity reduces Mexico's labor cost advantage is found in the Baja brussels sprouts harvest. In early 1992, workers in the San Quintín brussels sprouts harvest were being paid 20,000-23,000 pesos per 8-hour day, or approximately $.88 per hour. For this wage, workers hand-harvested 5 to 12 25-pound boxes per day. If we assume an average of 8 boxes, then the cost of harvest labor is 3.5 cents per pound. In comparison, brussels sprouts growers in Watsonville, California, estimated that it cost them 4.5 to 5 cents per pound to harvest sprouts with the aid of a machine. While hand harvesting allows more flexibility and repeated passes through the fields, nevertheless California growers reported higher yields than Baja growers and a harvest cost that is not even twice the Mexican cost.

Another example comes from the fresh tomato harvest in Baja California (Runsten, et al., 1992). In Baja California workers pick 25-pound buckets. In the fall of 1991, the average cost to

pick a bucket, in two firms paying daily wages plus piece rates over a minimum number of buckets, was 448 pesos, or about 14.6 cents. The per pound cost of picking was thus .58 cents. In contrast, the cost of picking fresh market tomatoes in California, where workers are mostly paid piece rates but pick by hand exactly as in Mexico, varied from 1.5 to 1.9 cents per pound in 1991.[5] These numbers suggest that the Baja California unit cost is 39 percent of the lowest unit cost in California. However, if one looks at the hourly wages received by workers in the different regions (shown in Table 2 below), tomato pickers in California averaged $7.91 per hour in a 1991 survey while Baja pickers interviewed averaged $.88 per hour. Baja hourly tomato wages were only 11 percent of California hourly wages. Thus, a wage differential that appears to be 9:1 in hourly wages is as low as 2.5:1 after productivity is factored in.

[TABLE 2 about here.]

Why is Mexican labor productivity so much lower? There are several reasons, apart from the occasional instances of more labor-intensive technologies in Mexico.

First, the convention in Mexican agriculture has been to pay daily wages. Workers in Sinaloa or Baja are often required to pick a minimum number of buckets or boxes per day, and it is remarked that many workers pick the minimum and go home. Because there have historically been ample supplies of labor in most

parts of the country, and because growers have not had to pay taxes or insurance related to the number of workers employed, more production has typically been obtained by "throwing workers at the field."

Second, one cannot discount the wage differential calling forth different levels of effort. In particular, new immigrants in the United States are typically willing to expend great effort to earn what they view as a very high wage in dollars. Workers in Mexico sometimes remark that it is hardly worth going out to the fields there given the salaries. Agricultural labor in Mexico is often seen as a means of survival, of subsistence, not as a means to accumulate wealth. Thompson and Martin (1989) reported that, in a survey in Sinaloa in 1989, migrant agricultural workers had only accumulated about $100 on average by the end of the season.

Third, there are extreme differences in supervision between the U.S. and Mexico. In California it is quite common for there to be a number of field supervisors constantly screaming at the workers to work harder if they are being paid by the hour, and threatening them not to make mistakes if they are being paid piece rates. Workers in Mexico who have worked in the United States often comment that they could not bear the "race" in U.S. fields. In contrast, in Mexico the fields are often calm, with the workers chatting among themselves. There are certain social norms in Mexico which restrain harassment of the workers, and often solidarity amongst the workers to limit the pace of work.

Many U.S. growers have complained that the mayordomos in Mexico are too beholden to the workers.

Fourth, there are many more women and children working in the fields in Mexico than in the United States. Women's productivity in the field is often lower than the men's because they have concurrent parental duties for their accompanying children which men typically do not. In a recent study of almost 2000 tomato/vegetable workers throughout Mexico, 53 percent were women and 15 percent were children under 14 years of age (Barrón, 1991). In the Bajío, it is not uncommon to see only women and children out weeding, transplanting, or even harvesting certain crops. This no doubt has something to do with the migration of male workers to the United States, and the preference of U.S. employers for young male workers to maximize productivity. The Department of Labor's National Agricultural Worker Survey reports that 73 percent of U.S. farmworkers are men (Mines, Gabbard, and Samardick, 1993).

In contrast to Mexican tomato regions, where half the workers are women, in California the vast majority of tomato workers are men. For example, in San Diego, there are almost no women working in tomato fields, while in Stockton, about 30 percent of the workers are women (Runsten, et al., 1992). This is likely due both to the difficulty women have in migrating in the U.S. farm labor market and to the more flexible work environment in Mexican production regions, such as Baja. Women can take days off in Baja to attend to their children without

repercussions (Zabin, 1992). Also, the convention of paying workers on a daily basis has permitted more women to participate, as the daily minimum number of pieces required has been set at relatively low levels. Finally, the ability of families to self-construct small shacks allows them to live as a group much more cheaply than would be possible anywhere in California.

Will NAFTA, though, help to alleviate these productivity problems by attracting new investment and technology to Mexican production? This investment will undoubtedly occur, as it has been occurring over recent decades. However, labor productivity differentials in fruits and vegetables are more the result of cultural, social, supervisory, and labor market differences than the result of inferior technology in Mexico. In fact, in the Mexican export sectors we generally see the same technology being used as in the United States; picking tomatoes into buckets does not vary much from one place to another.

Demand for Labor in Mexican Fruits and Vegetables

The lower productivity in Mexican fruit and vegetable production implies that labor demand per hectare is higher than in the United States. The macro models discussed earlier which have tried to assess the employment effects of NAFTA, however, are not disaggregated enough to give good estimates of these effects. Levy and van Wijnbergen (1992) do explicitly look at fruit and vegetable employment, but all fruits and vegetables are lumped together, using Bassoco and Rendón's (1973) labor-to-land

ratio of 165 person-days per irrigated hectare. As can be seen from the estimates in Table 1, within fruit and vegetable production labor demand varies widely by crop, and 165 person-days greatly exceeds the estimates for all but one of the crops listed. These labor coefficients are changing with new technologies and certainly have declined substantially over the past two decades. In some of the most dynamic Mexican export crops, such as broccoli, relatively little labor is used, while in strawberries, which uses a great deal of labor, Mexican production has been stagnant.

Table 3 gives a broad estimate of the employment capacity of some major fruit and vegetable crops. Broccoli, cauliflower, strawberries, ground tomatoes, and asparagus harvesting require about 7.5 million person-days in Mexico and 3.8 million in California at present. Translating days of employment into numbers of workers is not a straightforward task, since many tasks are highly seasonal and have large peak employment requirements. But assuming a full-time equivalent (FTE) of 240 days per year, these crops provide FTEs for about 31,100 workers in Mexico and 15,676 workers in California. If Mexican farmworkers who work in Mexico manage to work about the same amount as do those in the United States, then an average farm worker works 180 days per year.[6] At this level, these crops employ the equivalent of 41,467 workers in Mexico and 20,901 workers in California.

[TABLE 3 about here.]

As noted above, recent research suggests that Mexican fruit and vegetable production is not likely to expand at a greater rate than it did in the 1980s, and there will not be a large net shift of acreage from the United States as a result of NAFTA. Therefore, the employment potential may not be as great as is commonly assumed. Belotti (1991) projects tomato demand based on 1970-89 experience as requiring an expansion in acreage of 20-30 percent in both the U.S. and Mexico over the next decade. Such an expansion in all of the crops considered would only increase labor demand in Mexico by about 10,000 workers over the next ten years.

An increase of about 25 percent is more or less the actual expansion of acreage of all fruits and vegetables in Mexico in the 1980s (Gómez Cruz, et al., 1991), which was estimated at 544,000 hectares in 1991. Thus, the crops analyzed in this paper comprise only about 15 percent of the total acreage. If all fruits and vegetables exhibited labor demand similar to the crops studied here (which they clearly do not since these are among the most labor intensive), then a 25 percent expansion of acreage in the 1990s would require at most 67,000 additional workers, assuming labor became no more productive.

Clearly there are multiplier effects and employment creation in packing, processing, input supplies, transportation, etc. One optimistic study in Oregon estimated this at 1:1 for fruits and

vegetables, implying that without productivity increases, with overestimates of labor requirements, and assuming a large processing component, the best one could hope for would be 135,000 jobs. It is difficult to imagine that fruits and vegetables could absorb the 400,000 displaced rural workers that Levy and van Wijnbergen (1992) project they could. As new technologies are introduced, as well, the employment potential declines even more. This is even of concern in maize production, where incipient mechanization of the harvest in Mexican irrigated areas threatens to displace another large amount of labor. In addition, as can be noted from Table 1, those Mexican crops found to be most competitive with U.S. production, such as broccoli, cauliflower, and asparagus, generally have the highest productivity of land and labor relative to the United States, implying that a key to expanding Mexican fruit and vegetable competitiveness will be finding ways to reduce labor use.

One other aspect not considered here is the scale of producing units. There is some evidence in the data that small-scale producers use more labor-intensive methods to grow fruits and vegetables in Mexico than do large-scale producers, although this varies by crop (Young, 1987). One possibility to increase the absorption of labor in fruits and vegetables would be to concentrate more resources on enabling small-scale producers to participate in such remunerative activities. However, the removal of the control of the horticultural producers' association (CNPH) and the liberalization of banking have

apparently reduced the participation of small-scale producers in fruits and vegetables, and thus the structure is headed in the opposite direction (Stanford, 1991). U.S. firms have historically tried to avoid contracting with small-scale producers in Mexico, and expanded foreign investment under NAFTA does not bode well for the peasantry (Runsten, 1992).

Conclusion

The level of employment in Mexican fruits and vegetables clearly depends on three factors: consumer demand, labor productivity, and the share of output (and, hence, employment) supplied by Mexico. This paper has not attempted to analyze trends in the first two of these factors, except to challenge the notion that Mexican productivity might rise at a substantially higher rate than in the U.S.

The major contribution of this paper has been to look at possible trends in the third factor, the share of Mexican production and employment. This share is a function of wage, productivity, and input cost differences between the two countries. Having calculated, compiled, and verified productivity estimates, a difficult but critical exercise in the policy debate over NAFTA, we conclude that NAFTA will not result in as large an increase in Mexican fruit and vegetable employment as is commonly asserted.

While the agricultural hourly wage gap between California and Mexico is 6:1 or even higher, when the lower Mexican

productivity is factored in, the unit labor cost can be as low as 2:1 (or even less), depending on the crop. With the liberalization of the Mexican economy and the removal of government input subsidies, the costs of many other inputs, such as water, fertilizer, and chemicals, are equal or higher in Mexico than in California. Combined with generally lower yields in Mexico, though Mexico is competitive in much fruit and vegetable production, it does not have an absolute cost advantage in most crops, even with the tariff reductions contemplated in NAFTA.

Fruit and vegetable production absorbs more labor per hectare and per unit in Mexico than in the U.S., but the low productivity of labor and land in Mexico will prevent a large expansion of export production anytime soon as a result of NAFTA. Investment will not rapidly shift from the United States to Mexico as long as productivity remains a problem.

In fact, recent years have seen a wage convergence; wages measured in constant dollars are increasing in Mexican agriculture at the same time that they are falling in California. Real wages fell by over 10 percent on average in California in the 1980s and continue to fall as nominal wages have stagnated (CIRS, 1990). In addition, many of the costs of the agricultural labor market are being shifted to the workers in California. Growers have closed much of the on-farm housing and workers are forced to pay rent in local towns. Most busses have been eliminated and workers are obligated to pay for rides to the

fields. Workers increasingly must buy their own tools. Finally, only government-mandated benefits and insurance are provided, as labor management is shifted to farm labor contractors. In a study of fresh tomato harvesters in California, a typical worker spent 25 percent of his net income (or $50 out of $200 a week, as shown in Table 2) on housing, rides, and tools (Runsten, et al., 1992).

Mexican wages have stopped falling in real peso terms as inflation has declined in the 1990s. More importantly Mexican wages have started to rise in real dollar terms in recent years due to exchange rate shifts. This is decreasing the already small unit labor cost advantage that Mexico currently enjoys. In addition, in more remote regions of Mexico, such as the Northwest, which are dependent on migrant labor, growers incur significant recruitment, transportation, and housing costs. These increase labor costs to an unknown extent.

Ironically, NAFTA will, in all likelihood, speed up this convergence, at least from the U.S. side. On the one hand, the current oversupply of labor in California agriculture, which will likely worsen due to increased migration from Mexico, will continue the downward pressure on California wages. On the other hand, NAFTA has been, and will continue to be, used as a bargaining chip by U.S. employers threatening to move production to Mexico if they can not get wage concessions from their workers. This latter effect has manifested itself most clearly in food processing and agricultural packing operations in

California, where higher-wage unionized workers have been forced to accept nominal wage and benefit reductions.

The one factor mitigating agricultural wage convergence would be if maize liberalization and the privatization of ejidal land unleashed such a flood of labor that real wages did not rise in rural Mexico. In that case NAFTA would prove to impoverish agricultural workers all around.

TABLE 1

Labor Productivity Estimates, Mexico and California

Crop	Hours/Hectare		M. Tons/Hectare		Kilograms/Hour	
	Mexico	Calif.	Mexico	Calif.	Mexico	Calif.
Asparagus[a]	640[b]	226[c]	3.8[d]	3.8[e]	5.9	16.8
Broccoli[g]	144[f]	129[h]	9.4[i]	12.3[i]	65.3	95.3
Cauliflower[g]	230[f]	199[h]	9.5[i]	12.5[e]	41.3	62.8
Strawberries	4,382[j]	2,713[h]	20.0[j]	52.7[k]	4.6	19.4
Tomatoes[l]	528[f]	188[m]	22.4[n]	31.4[e]	42.4	167.0

Notes:

[a]Harvest labor only.
[b]Sonora, estimates from Arturo Puente, et al., 1992.
[c]Estimates are from Washington state, Kissam, et al., 1992.
[d]Reported yields for Mexican asparagus vary wildly, from below 1.5 metric tons per hectare to over 5. The California yield estimates would seem to be an upper bound on Mexico's average.
[e]1990, California county agricultural commissioner reports.
[f]Authors' farm survey, El Bajio, 1983.
[g]Processing only.
[h]Mamer and Wilkie, 1990, and survey data.
[i]1991, Bivings and Runsten, 1992.
[j]Survey data from Zamora for cost study reported in Bivings and Runsten, 1992.
[k]1988-90 average for California, reported in Bivings and Runsten, 1992.
[l]Ground or bush tomatoes only. Excludes pole tomatoes.
[m]1991, from Guerard, et al., 1991; Runsten, et al., 1992.
[n]Sinaloa, from Cook, et al., 1991.

TABLE 2

Mean Wages, Incomes, and Hours in Fresh Tomato Harvesting

Region	Piece rate ($)	Hourly equiv.	Daily Income	Gross Income per wk.	Net Income per wk.	Hrs per week	N
Stockton	.475	$8.20	$42.94	$203.52	$168.58	27.4	25
Fresno	.375	$8.11	52.77	227.87	209.22	37.4	19
San Diego	n.a.	$6.53	54.69	273.06	253.00	44.2	13
Baja CA	n.a.	$ .88	7.00	47.61	47.61	57.7	14
California	----	$7.91	49.95	227.50	201.38	34.6	57

Source: Survey data as reported in Runsten, et al., 1992.

TABLE 3

Labor Utilization, Mexico and California

Crop	Hectares in production		Person-days[a]	
	Mexico	California	Mexico	California
Asparagus	10,480[b]	14,529[b]	838,400[c]	410,444[c]
Broccoli[d]	12,303[e]	8,499[h]	221,454	137,046
Cauliflower[d]	3,187[e]	2,185[h]	91,626	54,352
Strawberries	5,500[f]	8,296[i]	3,012,625	2,813,381
Tomatoes[k]	50,000[g]	14,762[j]	3,300,000	346,907

Notes:

[a]See Table 1 for labor utilization per hectare.
[b]1991, see Cook, et al., 1991.
[c]Harvest labor only.
[d]Processing.
[e]1990, see Bivings and Runsten, 1992.
[f]1990, Consejo Nacional Agropecuario.
[g]1989, see Belotti, 1991, who estimates total Mexican tomato area at 78,000 hectares. We estimate 28,000 hectares are pole tomatoes in northern Mexico, which are not included here.
[h]1989, California county agricultural commissioner reports.
[i]1991, California Processing Strawberry Advisory Board.
[j]1990, Runsten, et al., 1992.
[k]Fresh market tomatoes grown on the ground, i.e. excludes pole tomatoes.

FIGURE 1

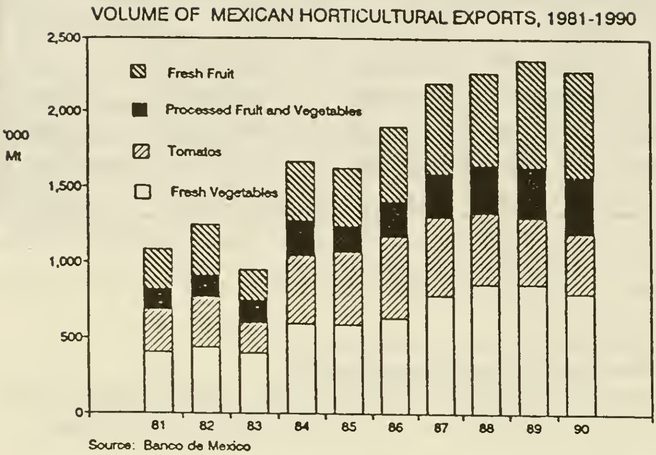
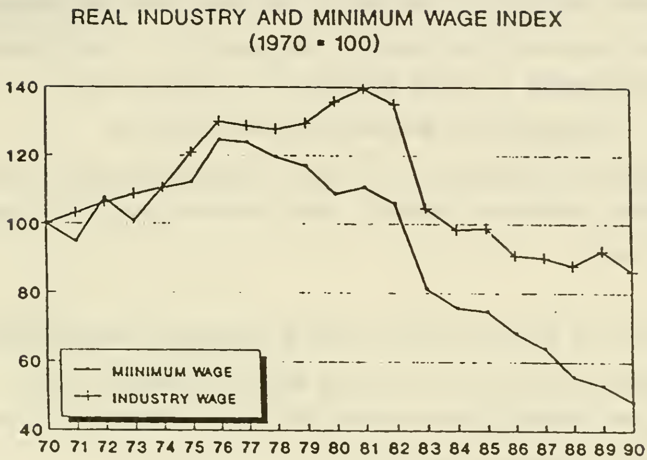

VOLUME OF MEXICAN HORTICULTURAL EXPORTS, 1981-1990
Fresh Fruit
Processed Fruit and Vegetables
Tomatos
Fresh Vegetables
'000 Mt
0
500
1,000
1,500
2,000
2,500
81
82
83
84
85
86
87
88
89
90
Source: Banco de Mexico

FIGURE 2



Source: Banco de Mexico, Indicadores Oportunos, various years

NOTES

1. Authors are listed in alphabetical order. An earlier version of this paper was first presented at the Latin American Studies Association meetings, Los Angeles, September 1992. David Runsten would like to thank the Ford Foundation for supporting his research. This paper has benefitted greatly from the observations and comments of many people, especially Carol Zabin, Ross Thomson, and Fatma Isikdag. The remaining errors are the authors' alone.

2. The value of these exports varies greatly from year to year due to market conditions and can be quite misleading. For example, the Florida freeze caused the value of Mexican winter vegetables to skyrocket in 1990.

3. See Runsten, Bivings and Marsh (1992) for a more detailed discussion of the obstacles to expanding fruit and vegetable production and exports in Mexico.

4. This does not take into account the costs of housing and transportation, which are borne by agricultural employers in certain regions of the United States and Mexico.

5. Data from Florida suggest that it averaged about 1.4 cents per pound there. See Griffith and Camposeco (1993).

6. Barrón (1991) reports data from the Secretaría de Agricultura y Recursos Hidráulicos (SARH) which indicate that most agricultural laborers in Mexico, in fact, only work 60 to 120 days per year.

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